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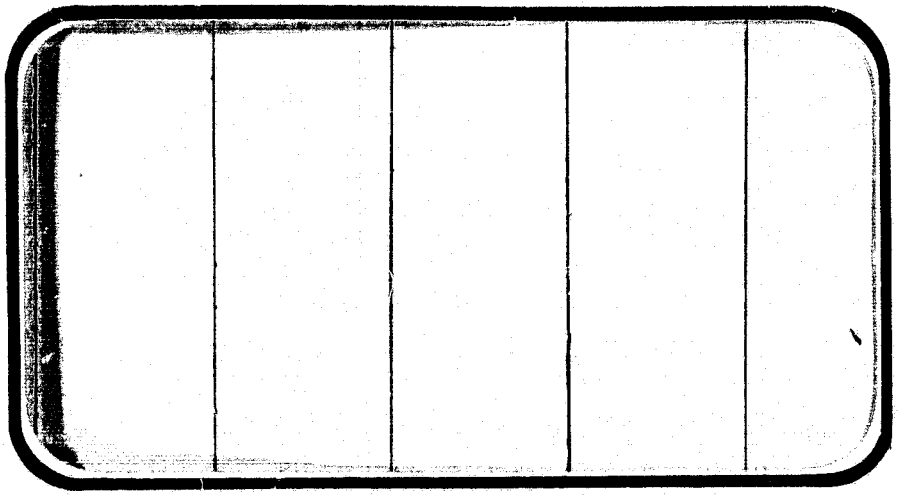

(NASA-CR-147632) INVESTIGATIONS OF THE 0.020-SCALE 88-OTS INTEGRATED SPACE SHUTTLE VEHICLE JET-PLUME MODEL IN THE NASA/AMES RESEARCH CENTER 11 BY 11-FOOT UNITARY PLAN WIND TUNNEL (IA80), VOLUME 1 (Chrysler

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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

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September, 1976

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NASA CR-147,632

VOLUME 1 OF 4

# INVESTIGATIONS OF THE 0.020-SCALE 88-OTS INTEGRATED SPACE SHUTTLE VEHICLE JET-PLUME MODEL IN THE NASA/AMES RESEARCH CENTER 11 x 11-FOOT UNITARY PLAN WIND TUNNEL (IA80)

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Prepared under NASA Contract Number NAS9-13247

by

Data Management Services
Chrysler Corporation Space Division
New Orleans, La. 70189

for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

| | |
|---|---|
| Test Number: | ARC 11-023 |
| NASA Series Number: | IA80 |
| Model Number: | 88-OTS |
| Test Dates: | 4 through 8 November 1974 |
| Occupancy Hours: | 132 |

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# INVESTIGATIONS OF THE 0.020-SCALE 88-OTS INTEGRATED SPACE SHUTTLE VEHICLE JET-PLUME MODEL IN THE NASA/AMES RESEARCH CENTER 11 x 11-FOOT UNITARY PLAN WIND TUNNEL (IA80)

By

M. E. Nichols, Rockwell International Space Division

## ABSTRACT

This report documents the results of jet-plume effects wind tunnel test IA80 of the 0.020-scale 88-OTS launch-configuration Space Shuttle Vehicle model in 11 x 11-foot leg of the NASA/Ames Research Center Unitary Plan Wind Tunnel. This test involved cold-gas Main Propulsion System and Solid Rocket - Motor plume simulations at Mach numbers from 0.6 to 1.4. IA80 was a continuation of a series of planned tests of plume effects, including IA19 and IA72. The test period was 4 through 8 November 1974, for 377 recorded runs.

The test-program objective was to determine integrated vehicle surface-pressure distributions, elevon and rudder hinge moments, and wing and vertical-tail root bending and torsional moments due to MPS and SRB plume interactions. Nozzle power conditions were controlled per pretest nozzle calibrations carried out by Rockwell International.

Model angle-of-attack was varied from -4° to +4°; model angle-of-sideslip was varied from -4° to +4°. Reynolds number was varied for certain test conditions and configurations,with the nominal freestream total pressure being 14.69 psia.

## ABSTRACT (Concluded)

This report consists of 4 volumes of force and pressure data. They are arranged in the following manner:

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| 127 | ORB VENT PRESSURES | ALPHA, BETA | Q | 611-644 |
| 128 | AVERAGE ORB VENT PRESSURES | ALPHA, BETA | R | 645-662 |
| 129 | DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES | ALPHA, BETA | S | 663-680 |
| 130 | PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH = 0.6 | ALPHA, BETA, PHI | T | 681-700 |
| 131 | PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH = 0.9 | ALPHA, BETA, PHI | T | 701-720 |
| 132 | PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH = 1.1 | ALPHA, BETA, PHI | T | 721-740 |
| 133 | PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH = 1.25 | ALPHA, BETA, PHI | T | 741-760 |
| 134 | PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH = 1.4 | ALPHA, BETA, PHI | T | 761-780 |
| 135 | PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH = 0.6 | ALPHA, BETA, XB/LB | U | 781-786 |
| 136 | PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH = 0.9 | ALPHA, BETA, XB/LB | U | 787-792 |
| 137 | PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH = 1.1 | ALPHA, BETA, XB/LB | U | 793-798 |

INDEX OF DATA FIGURES (Continued)

| FIGURE NUMBER | TITLE | CONDITIONS VARYING | PLOTTED COEFFICIENTS SCHEDULE | PAGE |
|---|---|---|---|---|
| 138 | PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH = 1.25 | ALPHA, BETA, XB/LB | U | 799-804 |
| 139 | PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH = 1.4 | ALPHA, BETA, XB/LB | U | 805-810 |

PLOTTED COEFFICIENTS SCHEDULE:

(A) CBMW, CTMW, CNW versus ALPHA

(B) CHEI, CHEO versus ALPHA

(C) CBMV, CTMV, CYV versus BETA

(D) CHR versus BETA

(E) CBMW, CTMW, CNW versus BETA

(F) CHEI, CHEO versus BETA

(G) CBMW, CTMW, CNW versus MACH NUMBER

(H) DCBMW, DCTMW, DCNW versus MACH NUMBER

(I) DCBMWE, DCTMWE, DCNWE versus MACH NUMBER

(J) CHEI, CHEO versus MACH NUMBER

(K) DCHEI, DCHEO versus MACH NUMBER

(L) DCHEIE, DCHEOE versus MACH NUMBER

## INDEX OF DATA FIGURES (Concluded)


(M) DCHR versus MACH NUMBER

(N) DCMBV, DCTMV, DCYV versus MACH NUMBER

(O) DXWCP, DYWCP versus MACH NUMBER

(P) DXVCP, DZVCP versus MACH NUMBER

(Q) CP versus MACH NUMBER

(R) CP#AV versus MACH NUMBER

(S) DCP#A versus MACH NUMBER

(T) CP versus R/ROD

(U) CP versus PHI

## NOMENCLATURE

| Symbol | Plot Symbol | Definition |
|---|---|---|
| $b$ | BREF | span of wing, in |
| $b_V$ | | span of vertical tail, in |
| $BM_V$ | | vertical tail-root bending moment (about vertical tail reference center), in-lb |
| $BM_{V_O}$ | | vertical tail-root bending moment at outboard gauge, in-lb |
| $BM_{V_I}$ | | vertical tail-root bending moment at inboard gauge, in-lb |
| $BM_W$ | | wing-root bending moment (about wing reference center), in-lb |
| $BM_{W_I}$ | | wing-root bending moment at inboard gauge, in-lb |
| $BM_{W_O}$ | | wing-root bending moment at outboard gauge, in-lb |
| $\bar{c}$ | LREF | MAC of wing, in |
| $C_{B_V}$ | CBMV | vertical tail-root bending-moment coefficient |
| $C_{B_W}$ | CBMW | wing-root bending-moment coefficient |
| $\bar{c}_E$ | | MAC of total elevon panel, in |
| $C_{H_{E_I}}$ | CHEI | hinge-moment coefficient for inboard elevon |
| $C_{H_{E_O}}$ | CHEO | hinge-moment coefficient for outboard elevon |
| $C_{H_{E_T}}$ | CHET | total elevon hinge-moment coefficient |

## NOMENCLATURE (Continued)

| Symbol | Plot Symbol | Definition |
|---|---|---|
| $C_{H_R}$ | CHR | hinge-moment coefficient for rudder |
| $C_{N_W}$ | CNW | wing normal-force coefficient |
| $C_{P_i}$ | CPi | pressure coefficient for model surface tap i |
| $CPR_j$ | | chamber-pressure ratio for nozzle j |
| $\bar{c}_R$ | | MAC of rudder panel, in |
| $C_{T_V}$ | CTMV | vertical tail-root twisting-moment coefficient |
| $C_{T_W}$ | CTMW | wing-root torsion-moment coefficient |
| $\bar{c}_V$ | | MAC of vertical tail, in |
| $C_{Y_V}$ | CYV | vertical-tail side-force coefficient |
| $EPR_j$ | | exit-pressure ratio for nozzle j |
| ET | | External Tank |
| $HM_{E_I}$ | | hinge moment of inboard elevon, in-lb |
| $HM_{E_O}$ | | hinge moment of outboard elevon, in-lb |
| $HM_R$ | | hinge moment of rudder, in-lb |
| M | MACH | freestream Mach number |
| MPS | | Main Propulsion System |
| N | | nominal |

## NOMENCLATURE (Continued)

| Symbol | Plot Symbol | Definition |
|---|---|---|
| OTS | | Orbiter + Tank + SRB |
| $P_{c_j}$ | | chamber pressure (absolute) of nozzle j |
| $P_{cSRM}$ | | SRM supply total pressure, psia (as set) |
| $P_{cMPS}$ | | MPS supply total pressure, psia (as set) |
| $P_{e_j}$ | | exit pressure (absolute) of nozzle j |
| $P_i$ | | pressure (absolute) at model surface tap i |
| $P_T$ | | freestream total pressure, psia |
| $P_\infty$ | | freestream static pressure, psia |
| q | Q(PSF) | freestream dynamic pressure, psf |
| Re/ft | RN/L | freestream unit Reynolds number, $ft^{-1}$ |
| S | SREF | reference wing area, $ft^2$ |
| SRB | | Solid Rocket Booster |
| SRM | | Solid Rocket Motor |
| SSME | | Space Shuttle Main Engine |
| $S_E$ | | reference elevon area, $ft^2$ |
| $S_R$ | | reference rudder area, $ft^2$ |
| $S_V$ | | reference vertical tail area, $ft^2$ |
| $TM_V$ | | vertical tail-root torsional moment (about vertical tail reference center), in-lb |
| $TM_{V_G}$ | | vertical tail-root torsional moment at gauge, in-lb |

## NOMENCLATURE (Continued)

| Symbol | Plot Symbol | Definition |
|---|---|---|
| $TM_W$ | | wing-root torsional moment (about wing reference center), in-lb |
| $TM_{W_G}$ | | wing-root torsional moment at gauge, in-lb |
| $T_{T_{MPS}}$ | | MPS supply total temperature, °R |
| $T_{T_{SRM}}$ | | SRM supply total temperature, °R |
| $T_T$ | | freestream total temperature, °R |
| $T_\infty$ | | freestream static temperature, °R |
| $X_{CP_V}$ | XVCP | vertical tail center-of-pressure, longitudinal location, in |
| $X_{CP_W}$ | XWCP | wing center-of-pressure, longitudinal location,in |
| $X_N$ | | Orbiter nose station, in |
| $X_{TM_{V_G}}$ | | longitudinal location of vertical tail-root torsional gauge, in |
| $X_{TM_{W_G}}$ | | longitudinal location of wing-root torsional gauge, in |
| $X_{VRC}$ | | longitudinal (station) location of vertical tail reference center, in |
| $X_{WRC}$ | | longitudinal (station) location of wing reference center, in |
| $Y_{BM_{W_I}}$ | | lateral location of inboard wing-root bending gauge, in |
| $Y_{BM_{W_O}}$ | | lateral location of outboard wing-root bending gauge, in |

## NOMENCLATURE (Continued)

| Symbol | Plot Symbol | Definition |
|---|---|---|
| $Y_{CP_W}$ | YWCP | wing center-of-pressure, lateral location, in |
| $Y_{WRC}$ | | lateral (buttplane) location of wing reference center, in |
| $Z_{BM_{V_I}}$ | | vertical location of inboard vertical tail-root bending gauge, in |
| $Z_{BM_{V_O}}$ | | vertical location of outboard vertical tail-root bending gauge, in |
| $Z_{CP_V}$ | ZVCP | vertical tail center-of-pressure, vertical location, in |
| $Z_{VRC}$ | | vertical (waterplane) location of vertical tail reference center, in |
| $\alpha$ | ALPHA | model angle-of-attack, deg |
| $\alpha_{Nj}$ | | pitch angle of nozzle-j measured in a plane parallel to the Orbiter plane of symmetry, degrees |
| $\beta$ | BETA | model angle-of-sideslip, deg |
| $\gamma_{N_j}$ | | pitch angle of nozzle-j measured in a plane which yaws with the nozzle, degrees |
| $\delta_{BF}$ | BDFLAP | bodyflap deflection, deg |
| $\delta_{E_{l_I}}$ | ELV-LI | left inboard elevon deflection, deg |
| $\delta_{E_{l_O}}$ | ELV-LO | left outboard elevon deflection, deg |
| $\delta_{E_{r_I}}$ | ELV-RI | right inboard elevon deflection, deg |
| $\delta_{E_{r_O}}$ | ELV-RO | right outboard elevon deflection, deg |

## NOMENCLATURE (Continued)

| Symbol | Plot Symbol | Definition |
|---|---|---|
| $\delta_{E_I}$ | ELV-IB | inboard elevon deflection, deg |
| $\delta_{E_O}$ | ELV-OB | outboard elevon deflection, deg |
| $\delta_R$ | RUDDER | rudder deflection, deg |
| $\delta_{SB}$ | SPDBRK | speedbrake deflection, deg |
| $\Delta C_{p_i}$ | DCPi | incremental pressure coefficient, i = tap# |
| $\Delta C_{p_{av_\#}}$ | DCP#A | average value of incremental pressure coefficients for model surface taps |
| $\psi_{N_j}$ | | yaw angle of nozzle-j measured in an Orbiter waterplane, deg |
| $\phi$ | PHI | radial location, deg |
| $C_{p_{av_\#}}$ | CP#AV | average value of pressure coefficients for model surface taps |
| $\Delta(i)$ | D(i) | incremental coefficient (i) due to thrust (i) ≡ previously defined coefficient |
| $\Delta(i)_{\delta_E}$ | D(i)E | incremental coefficient (i) due to elevon deflection, (i) ≡ previously defined coefficient |
| $\ell_B$ | | body length, in |
| $R/R_{od}$ | R/ROD | radius of tap location divided by outer radius |
| $X_B/\ell_B$ | XB/LB | SRB base longitudinal distance divided by body length |

## NOMENCLATURE (Concluded)

SUBSCRIPTS

| | |
|---|---|
| B | base, body |
| c | chamber |
| e | exit |
| E | elevon |
| G | gauge |
| i | surface-pressure tap number |
| I | inboard |
| j | nozzle number |
| l | left |
| N | nozzle, Orbiter nose |
| O | outboard, Orbiter |
| r | right |
| R | rudder |
| S | Solid Rocket Booster |
| T | External Tank, total |
| V | vertical tail |
| W | wing |
| ∞ | static |

## CONFIGURATIONS INVESTIGATED

The model employed in Test IA80, 88-OTS, was a 0.020-scale representation of the Vehicle 5 Space Shuttle launch configuration with mated Orbiter, External Tank, and Solid Rocket Boosters. Main Propulsion System and Solid Rocket Motor cold-gas plume-simulation was made possible by dual high-pressure air-supply systems.

Various elevon control settings were incorporated in the run schedule, while no gimbal-angle changes were made on the nozzles. Several different nozzle operation pressures were set for each Mach number, and two nozzle contours were tested.

Component dimensions are presented in Table III. Control-setting parameters were as indicated in Table II. Model surface-pressure tap locations are shown in Table IV.

The Orbiter, designated as O, was comprised of components identified as follows:

| Component Symbol | Description |
|---|---|
| $B_{62}$ | fuselage |
| $C_{12}$ | canopy |
| $E_{52}$ | elevons |
| $F_{10}$ | bodyflap |
| $M_{16}$ | OMS/RCS pods |
| $N_{87}$ | MPS nozzles, conical |
| $N_{89}$ | OMS nozzles |

## CONFIGURATIONS INVESTIGATED (Continued)

| | |
|---|---|
| $N_{104}$ | MPS nozzles, contoured |
| $R_5$ | rudder/speedbrake |
| $V_8$ | vertical tail |
| $W_{116}$ | wing |

The External Tank, designated as $T_{28}$, was comprised of components identified as follows:

| | |
|---|---|
| $AT_{28}$ | attach structure |
| $AT_{31}$ | attach structure |
| $AT_{32}$ | attach structure |
| $FR_{10}$ | aft attach crossbeam |
| $FL_{10}$ | feedline |
| $FL_{11}$ | feedline |
| $PT_{12}$ | ET protuberances |
| $PT_{22}$ | ET protuberances |
| $PT_{23}$ | ET protuberances |
| $PT_{24}$ | ET protuberances |
| $PT_{25}$ | ET protuberances |
| $PT_{26}$ | ET protuberances |
| $PT_{27}$ | ET protuberances |

## CONFIGURATIONS INVESTIGATED (Concluded)

The solid rocket booster, designated as $S_{22}$, was composed of components identified as follows:

| | |
|---|---|
| $N_{88}$ | SRB nozzles |
| $PS_{11}$ | SRB protuberances |
| $PS_{12}$ | SRB protuberances |
| $PS_{13}$ | SRB protuberances |
| $PS_{14}$ | SRB protuberances |
| $PS_{17}$ | SRB protuberances |
| $PS_{18}$ | SRB protuberances |
| $PS_{19}$ | SRB protuberances |

The launch configuration was designated as OTS on the Data Set/Run Number Collation Summary sheets.

## TEST FACILITY DESCRIPTION

The NASA/Ames Research Center Unitary Plan Wind Tunnel 11 x 11 transonic leg is one of three circuits operating from a common power system and two compressor systems. The 11 x 11 leg is capable of attaining Mach numbers from 0.60 to 1.40, at Reynolds numbers from $1.7 \times 10^6$ per foot to $9.4 \times 10^6$ per foot.

The tunnel is a closed-return, air-medium, variable-density facility, operating at ambient temperatures and having a bled test section for transonic conditions.

Models are supported by means of conventional stings or sting/strut assemblies for force, moment, pressure, and component-loads testing. The tunnel sector-strut system can attain angles-of-attack to $\pm$ 15 degrees and angles-of-sideslip to $\pm$ 15 degrees about its body-of-revolution.

Schlieren and shadowgraph photographic systems are available, and high-pressure air-supply systems exist for use in power-plume simulations and thrust tests.

## DATA REDUCTION

Standard tunnel operation parameters were computed by the facility along with model plume-simulation pressure data, model surface-pressure values and coefficients, rudder and elevon hinge-moments, and air-supply temperatures. Model angle-of-attack was determined by the onboard dangleometer. Furthermore, wing and vertical-tail bending and torsional moments were recorded and reduced to present centers-of-pressure and forces.

The following equations and methods were used:

Wing Normal-Force Coefficient:

$$C_{N_W} = \frac{BM_{W_I} - BM_{W_0}}{(Y_{BM_{W_0}} - Y_{BM_{W_I}})\, S\, q}$$

Wing-Root Bending-Moment Coefficient:

$$C_{B_W} = \left[\frac{BM_{W_0}}{S\, q\, b}\right] + \left[\frac{C_{N_W}\,(Y_{BM_{W_0}} - Y_{WRC})}{b}\right]$$

or:

$$= \left[\frac{BM_{W_I}}{S\, q\, b}\right] + \left[\frac{C_{N_W}\,(Y_{BM_{W_I}} - Y_{WRC})}{b}\right]$$

Wing-Root Torsional-Moment Coefficient:

$$C_{T_W} = \left[\frac{TM_{W_G}}{S\, q\, \bar{c}}\right] - \left[\frac{C_{N_W}\,(X_{TM_{W_G}} - X_{WRC})}{\bar{c}}\right]$$

## DATA REDUCTION (Continued)

Wing-Center-of-Pressure:

$$X_{CP_W} = X_{TM_{W_G}} - \left[\frac{TM_{W_G}}{S\ C_{N_W}\ q}\right]$$

$$Y_{CP_W} = Y_{BM_{W_I}} + \left[\frac{BM_{W_I}}{S\ C_{N_W}\ q}\right]$$

or:

$$= Y_{BM_{W_O}} + \left[\frac{BM_{W_O}}{C_{N_W}\ S\ q}\right]$$

Vertical Tail Side-Force Coefficient:

$$C_{Y_V} = \frac{BM_{V_I} - BM_{V_O}}{(Z_{BM_{V_O}} - Z_{BM_{V_I}})\ S_V\ q}$$

Vertical Tail-Root Bending-Moment Coefficient:

$$C_{B_V} = \left[\frac{BM_{V_O}}{S_V\ q\ b_V}\right] + \left[\frac{C_{Y_V}\ (Z_{BM_{V_O}} - Z_{VRC}}{b_V}\right]$$

or:

$$= \left[\frac{BM_{V_I}}{S_V\ q\ b_V}\right] + \left[\frac{C_{Y_V}(Z_{BM_{V_I}} - Z_{VRC}}{b_V}\right]$$

Vertical Tail-Root Torsional-Moment Coefficient:

$$C_{T_V} = \left[\frac{TM_{V_G}}{S_V\ q\ \bar{c}_V}\right] = \left[\frac{C_{Y_V}\ (X_{TM_{V_G}} - X_{VRC})}{\bar{c}_V}\right]$$

DATA REDUCTION (Continued)

Vertical Tail Center-of-Pressure:

$$X_{CP_V} = X_{TM_{V_G}} - \left[\frac{TM_{V_G}}{C_{Y_V} S_V q}\right]$$

$$Z_{CP_V} = Z_{BM_{V_I}} + \left[\frac{BM_{V_I}}{C_{Y_V} S_V q}\right]$$

or:

$$= Z_{BM_{V_O}} + \left[\frac{BM_{V_O}}{C_{Y_V} S_V q}\right]$$

Nozzle-Pressure Ratios:

$$CPR_j = \frac{Pc_j}{P_\infty}$$

$$EPR_j = \frac{Pe_j}{P_\infty}$$

where: j = 1, Top MPS nozzle
2, L.H. MPS nozzle
3, R.H. MPS nozzle
4, L.H. SRB nozzle
5, R.H. SRB nozzle

Hinge-Moments:

$$C_{H_{E_I}} = \frac{HM_{E_I}}{S_E q \bar{c}_E}$$

$$C_{H_{E_O}} = \frac{HM_{E_O}}{S_E q \bar{c}_E}$$

$$C_{H_{E_T}} = C_{H_{E_I}} + C_{H_{E_O}}$$

$$C_{H_R} = \frac{HM_R}{S_R q \bar{c}_R}$$

## DATA REDUCTION (Continued)

Surface-Pressure Coefficients:

$$C_{p_i} = \frac{P_i - P_\infty}{q}$$

Coefficient averages:

For $i = 2, 21, 22, 39, 40, 60, 67, 68, 75, 76$

$$C_{p_{av_i}} = \left(C_{p_i} + C_{p_{i+2}} + C_{p_{i+4}} + C_{p_{i+6}}\right)/4$$

For $i = 12, 29, 30, 47, 48$:

$$C_{p_{av_i}} = \left(C_{p_i} + C_{p_{i+2}} + C_{p_{i+6}} + C_{p_{i+8}}\right)/4$$

And:

$$C_{p_{av_{13}}} = \left(C_{p_{13}} + C_{p_{17}} + C_{p_{19}}\right)/3$$

$$C_{p_{av_{59}}} = \left(C_{p_{59}} + C_{p_{61}} + C_{p_{63}} + C_{p_{67}}\right)/4$$

To reflect plume effects on surface pressures, incremental data were computed from results of tests with plume simulation and tests without plume simulation:

$$\Delta C_{p_i} = C_{p_i}\left(\begin{matrix}\text{with}\\ \text{plume}\end{matrix}\right) - C_{p_i}\left(\begin{matrix}\text{without}\\ \text{plume}\end{matrix}\right)$$

$$\Delta C_{p_{av_i}} = C_{p_{av_i}}\left(\begin{matrix}\text{with}\\ \text{plume}\end{matrix}\right) - C_{p_{av_i}}\left(\begin{matrix}\text{without}\\ \text{plume}\end{matrix}\right)$$

DATA REDUCTION (Continued)

| Symbol | Full-Scale | Model-Scale |
|---|---|---|
| $b$ | 936.68 in | 18.734 in |
| $b_V$ | 315.72 in | 6.3144 |
| $\bar{c}$ | 474.8 in | 9.496 in |
| $\bar{c}_E$ | 90.70 in | 1.814 in |
| $\bar{c}_R$ | 73.20 in | 1.464 in |
| $\bar{c}_V$ | 199.81 in | 3.996 in |
| $\ell_B$ | 1290.3 in | 25.806 in |
| $S_E$ | 210.00 $ft^2$ | 0.08400 $ft^2$ |
| $S_R$ | 100.15 $ft^2$ | 0.04006 $ft^2$ |
| $S$ | 2690.0 $ft^2$ | 1.0760 $ft^2$ |
| $S_V$ | 413.25 $ft^2$ | 0.16530 $ft^2$ |
| $X_N$ | 235.0 | 4.700 in |
| $X_{TM_{V_G}}$ | —— | 28.5500 in |
| $X_{TM_{W_G}}$ | —— | 24.6400 in |
| $X_{VRC}$ | 1414.3 in | 28.286 in |
| $X_{WRC}$ | 1307.0 in | 26.140 in |
| $Y_{BM_{W_I}}$ | —— | 2.4962 in |
| $Y_{BM_{W_O}}$ | —— | 3.9037 in |

DATA REDUCTION (Concluded)

| Symbol | Full-Scale | Model-Scale |
|---|---|---|
| $Y_{WRC}$ | 106.0 in | 2.120 in |
| $Z_{BMV_I}$ | —— | 10.4681 in |
| $Z_{BMV_O}$ | —— | 11.3935 in |
| $Z_{VRC}$ | 503.0 in | 10.060 in |

Resulting data are presented in the data figures and in the appendix.

## RESULTS AND DISCUSSION

Generally high data confidence can be ascribed to the results of this test program, as instrumentation anomalies were few and correctable. Most data error was attributable to model failure, and the following outlines those incidents.

Hinge-moment data was consistently good with only minor zero-return changes due to gradual wear of hinge bearings in the elevons.

Post test data-correction factors had to be applied to Main Propulsion System nozzle chamber pressure readings, as the total-pressure probes progressively failed during testing. However, these corrections were small, on the order of 1%, and are already incorporated in data presented herein.

Scanivalve-measured Orbiter, External Tank, and Solid Rocket Booster surface pressures were also extremely reliable, with only one orifice apparently plugged, Tap #30 shown in Table 4.

Due to the loss of the right-hand contoured MPS nozzle during Run 311, all contoured-nozzle configuration testing after Run 313 employed the conical nozzle in the top-center location. The top-center contoured nozzle was used in the right-hand location, consequently.

TABLE I

TEST : IA80 DATE : 8 NOV., 1974

TEST CONDITIONS

| MACH NUMBER | REYNOLDS NUMBER (per foot) | DYNAMIC PRESSURE (pounds/sq. inch) | STAGNATION TEMPERATURE (degrees Fahrenheit) |
|---|---|---|---|
| 0.60 | $1.75 \times 10^6$ | 1.46 | 77 |
| 0.60 | $2.56 \times 10^6$ | 2.13 | 81 |
| 0.60 | $3.39 \times 10^6$ | 2.93 | 91 |
| 0.90 | $2.17 \times 10^6$ | 2.44 | 85 |
| 0.90 | $3.13 \times 10^6$ | 3.52 | 90 |
| 0.90 | $4.26 \times 10^6$ | 4.48 | 92 |
| 1.10 | $2.25 \times 10^6$ | 2.93 | 90 |
| 1.10 | $3.27 \times 10^6$ | 4.26 | 94 |
| 1.10 | $4.30 \times 10^6$ | 5.79 | 109 |
| 1.25 | $2.27 \times 10^6$ | 3.11 | 90 |
| 1.25 | $3.29 \times 10^6$ | 4.52 | 94 |
| 1.25 | $4.36 \times 10^6$ | 6.16 | 105 |
| 1.40 | $2.23 \times 10^6$ | 3.18 | 90 |
| 1.40 | $3.22 \times 10^6$ | 4.62 | 96 |
| 1.40 | $4.25 \times 10^6$ | 6.32 | 111 |
| | | | |

BALANCE UTILIZED: None

| | CAPACITY: | ACCURACY: | COEFFICIENT TOLERANCE: |
|---|---|---|---|
| NF | | | |
| SF | | | |
| AF | | | |
| PM | | | |
| RM | | | |
| YM | | | |

COMMENTS:

TABLE II.

TEST: IA80 — DATA SET RUN NUMBER COLLATION SUMMARY — DATE: 8 NOV 74

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. α | SCHD. β | PARAMETERS/VALUES δRB | δSIDE | δEL | δEC | RN | M | NO. OF RUNS | ANGLE-OF-ATTACK −4 | 0 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE4001 | ΦTS | | B | N+ | N | 0 | 0 | 3.4 | 0.6 | | 240 | 241 | 242 |
| 02 | | | | | | | | 4.25 | 0.9 | | 222 | 223 | 224 |
| 03 | | | | | | | | | 1.1 | | 74 | 75 | 76 |
| 04 | | | | | | | | | 1.25 | | 48 | 49 | 50 |
| 05 | | | | | | | | | 1.4 | | 1 | 2 | 3 |
| 06 | | | | N+ | N | | | 3.4 | 0.6 | | 243 | 244 | 245 |
| 07 | | | | | | | | 4.25 | 0.9 | | 225 | 226 | 227 |
| 08 | | | | | | | | | 1.1 | | 77 | 78 | 79 |
| 09 | | | | | | | | | 1.25 | | 51 | 52 | 53 |
| 10 | | | | | | | | | 1.4 | | 4 | 5 | 6 |
| 11 | | | | N | N+ | | | 3.4 | 0.6 | | 249 | 250 | 251 |
| 12 | | | | | | | | 4.25 | 0.9 | | 231 | 232 | 233 |
| 13 | | | | | | | | | 1.1 | | 80 | 81 | 82 |
| 14 | | | | | | | | | 1.25 | | 54 | 55 | 56 |
| 15 | | | | | | | | | 1.4 | | 7 | 8 | 9 |
| 16 | | | | N | N− | | | | 0.9 | | 234 | 235 | 236 |
| 17 | | | | | | | | | 1.1 | | 93 | 84 | 85 |
| 18 | | | | | | | | | 1.25 | | 57 | 58 | 59 |

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

SEE ATTACHED SHEET FOR COMPLETE COEFFICIENT SCHEDULES

COEFFICIENTS — IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

ORIGINAL PAGE IS

TABLE II. - Continued.

TEST: IA80 | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE:

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. α | SCHD. β | PARAMETERS/VALUES SRB | SSME | δEI | δEO | RN | M | NO. OF RUNS | ANGLE-OF-ATTACK -4 | ANGLE-OF-ATTACK 0 | ANGLE-OF-ATTACK 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REH019 | ΦTS | | B | N | N- | 0 | 0 | 4.25 | 1.4 | | 10 | 11 | 12 |
| 20 | | | | N | N | | | 3.4 | 0.6 | | 246 | 247 | 248 |
| 21 | | | | | | | | 4.25 | 0.9 | | 228 | 229 | 230 |
| 22 | | | | | | | | | 1.1 | | 86 | 87 | 88 |
| 23 | | | | | | | | | 1.25 | | 60 | 61 | 62 |
| 24 | | | | ↓ | ↓ | | | | 1.4 | | 13 | 14 | 15 |
| 25 | | | | N- | N | | | | 1.1 | | 89 | 90 | 91 |
| 26 | | | | | | | | | 1.25 | | 63 | 64 | 65 |
| 27 | | | | ↓ | ↓ | | | ↓ | 1.4 | | 16 | 17 | 18 |
| 28 | | | | OFF | OFF | | | 3.4 | 0.6 | | 237 | 238 | 239 |
| 29 | | | | | | | | 4.25 | 0.9 | | 219 | 220 | 221 |
| 30 | | | | | | | | | 1.1 | | 69 | 70 | 71 |
| 31 | | | | | | | | | 1.25 | | 66 | 67 | 68 |
| 32 | | | | | | | | ↓ | 1.4 | | 19 | 20 | 21 |
| 33 | | | | | | | | 1.75 | 0.6 | | 270 | 271 | 272 |
| 34 | | | | | | | | 2.25 | 0.9 | | 267 | 268 | 269 |
| 35 | | | | | | | | | 1.1 | | 22 | 23 | 24 |
| ↓ 36 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.25 | | 30 | 31 | 32 |

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES

COEFFICIENTS

IDVAR (1) IDVAR (2) IDV

TABLE II. - Continued.

TEST: IA80 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE:

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. α | SCHD. β | SRB | SSME | $\delta_{EI}$ | $\delta_{EO}$ | RN | M | NO. OF RUNS | MACH NO. | ANGLE-OF-ATTACK -4 | ANGLE-OF-ATTACK 0 | ANGLE-OF-ATTACK 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE4037 | ΦTS | | 3 | OFF | OFF | 0 | 0 | 2.25 | 1.4 | | | 33 | 34 | 35 |
| 38 | | | | N | N | | | 1.75 | 0.6 | | | 273 | 274 | 275 |
| 39 | | | | | | | | 2.25 | 0.9 | | | 264 | 265 | 266 |
| 40 | | | | ↓ | ↓ | | | 2.25 | 1.1 | | | 27 | 28 | 29 |
| 41 | | | | OFF | OFF | | | 2.5 | 0.6 | | | 252 | 253 | 254 |
| 42 | | | | | | | | 3.25 | 0.9 | | | 258 | 259 | 260 |
| 43 | | | | | | | | | 1.1 | | | 36 | 37 | 38 |
| 44 | | | | | | | | | 1.25 | | | 42 | 43 | 44 |
| 45 | | | | ↓ | ↓ | | | ↓ | 1.4 | | | 45 | 46 | 47 |
| 46 | | | | N | N | | | 2.5 | 0.6 | | | 255 | 256 | 257 |
| 47 | | | | | | | | 3.25 | 0.9 | | | 261 | 262 | 263 |
| 48 | | | ↓ | ↓ | ↓ | ↓ | ↓ | 3.25 | 1.1 | | | 39 | 40 | 41 |
| 49 | | | 0 | OFF | OFF | 8 | 4 | 4.25 | V | | 92 | | | |
| 50 | | | 0 | N | N | | | | V | | 93 | | | |
| 51 | | | B | OFF | OFF | | | | 0.98 | | | 112 | 113 | 114 |
| 52 | | | | N | N | | | ↓ | 0.98 | | | 115 | 116 | 117 |
| 53 | | | | OFF | OFF | | | 3.4 | 0.6 | | | 288 | 289 | 290 |
| 54 | | | ↓ | ↓ | ↓ | ↓ | ↓ | 4.25 | 0.9 | | | 296 | 297 | 298 |

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS — IDVAR (1) — IDVAR (2) — NDV

α OR β SCHEDULES

TABLE II. - Continued.

TEST: IA 80 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE:

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. α | SCHD. β | SRB | SSME | SEI | SEO | RN | M1 | NO. OF RUNS | ANGLE-OF-ATTACK -4 | ANGLE-OF-ATTACK 0 | ANGLE-OF-ATTACK 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE4055 | ΦTS | | B | OFF | OFF | 8 | 4 | 4.25 | 1.1 | | 106 | 107 | 108 |
| 56 | | | | | | | | | 1.25 | | 94 | 95 | 96 |
| 57 | | | | | | | | | 1.4 | | 100 | 101 | 102 |
| 58 | | | | N | N | | | 3.4 | 0.6 | | 291 | 292 | 293 |
| 59 | | | | | | | | 4.25 | 0.9 | | 299 | 300 | 301 |
| 60 | | | | | | | | | 1.1 | | 109 | 110 | 111 |
| 61 | | | | | | | | | 1.25 | | 97 | 98 | 99 |
| 62 | | | | | | | | | 1.4 | | 103 | 104 | 105 |
| 63 | | | | N+ | N | | | | 0.98 | | 118 | 119 | 120 |
| 64 | | | | OFF | OFF | 8 | -4 | 3.4 | 0.6 | | 314 | 315 | 316 |
| 65 | | | | | | | | 4.25 | 0.9 | | 302 | 303 | 304 |
| 66 | | | | | | | | | 1.1 | | 133 | 134 | 135 |
| 67 | | | | | | | | | 1.25 | | 129 | 128 | 129 |
| 68 | | | | | | | | | 1.4 | | 121 | 122 | 123 |
| 69 | | | | N | N | | | 3.4 | 0.6 | | 317 | 318 | 319 |
| 70 | | | | | | | | 4.25 | 0.9 | | 305 | 306 | 307 |
| 71 | | | | | | | | | 1.1 | | 136 | 137 | 138 |
| 72 | | | | | | | | | 1.25 | | 130 | 131 | 132 |

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS — IDVAR (1) — IDVAR (2) — NDV

α OR β SCHEDULES

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TABLE II. - Continued.

TEST: IA80 — DATA SET RUN NUMBER COLLATION SUMMARY — DATE:

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. α | SCHD. β | SRB | SSME | SEI | SEO | RN | M | NO. OF RUNS | ANGLE-OF-ATTACK -4 | ANGLE-OF-ATTACK 0 | ANGLE-OF-ATTACK 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE4073 | OTS | | B | N | N | 8 | -4 | 4.25 | 1.4 | | 124 | 125 | 126 |
| 74 | ↓ | | ↓ | OFF | OFF | 8 | 0 | 3.4 | 0.6 | | 276 | 277 | 278 |
| 75 | | | | ↓ | ↓ | ↓ | ↓ | 4.25 | 0.9 | | 292 | 293 | 294 |
| 76 | | | | | | | | ↓ | 1.1 | | 153 | 154 | 155 |
| 77 | | | | | | | | | 1.25 | | 147 | 148 | 149 |
| 78 | | | | ↓ | ↓ | | | ↓ | 1.4 | | 141 | 142 | 143 |
| 79 | | | | N | N | | | 3.4 | 0.6 | | 279 | 280 | 281 |
| 80 | | | | ↓ | ↓ | | | 4.25 | 0.9 | | 285 | 286 | 287 |
| 81 | | | | | | | | ↓ | 1.1 | | 156 | 157 | 158 |
| 82 | | | | | | | | | 1.25 | | 150 | 151 | 152 |
| 83 | | | | ↓ | ↓ | ↓ | ↓ | ↓ | 1.4 | | 144 | 145 | 146 |
| 84 | | | | OFF | OFF | 9 | 2 | 3.4 | 0.6 | | 326 | 327 | 328 |
| 85 | | | | ↓ | ↓ | ↓ | ↓ | 4.25 | 0.9 | | 320 | 321 | 322 |
| 86 | | | | ↓ | ↓ | | | ↓ | 1.1 | | 159 | 160 | 161 |
| 87 | | | | N | N | | | 3.4 | 0.6 | | 329 | 330 | 331 |
| 88 | | | | ↓ | ↓ | | | 4.25 | 0.9 | | 323 | 324 | 325 |
| 89 | | | | ↓ | ↓ | ↓ | ↓ | 4.25 | 1.1 | | 162 | 163 | 164 |
| 90 | ↓ | | ↓ | OFF | OFF | 4 | 4 | 3.4 | 0.6 | | 332 | 333 | 334 |

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES — COEFFICIENTS — IDVAR (1) — IDVAR (2) — NCV

TABLE II. - Continued.

TEST: IA80 | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE :

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. α | SCHD. β | SRB | SME | SEI | SEO | RN | M | NO. OF RUNS | ANGLE-OF-ATTACK -4 | ANGLE-OF-ATTACK 0 | ANGLE-OF-ATTACK 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE4091 | ΦTS | | B | OFF | OFF | 4 | 4 | 4.25 | 0.9 | | 338 | 339 | 340 |
| 92 | | | | | | | | | 1.1 | | 177 | 178 | 179 |
| 93 | | | | | | | | | 1.25 | | 171 | 172 | 173 |
| 94 | | | | ↓ | ↓ | | | ↓ | 1.4 | | 165 | 166 | 167 |
| 95 | | | | N | N | | | 3.4 | 0.6 | | 335 | 336 | 337 |
| 96 | | | | | | | | 4.25 | 0.9 | | 341 | 342 | 343 |
| 97 | | | | | | | | | 1.1 | | 180 | 181 | 182 |
| 98 | | | | | | | | | 1.25 | | 174 | 175 | 176 |
| 99 | | | | ↓ | ↓ | ↓ | ↓ | ↓ | 1.4 | | 168 | 169 | 170 |
| A0 | | | | OFF | OFF | 0 | 4 | 3.4 | 0.6 | | 344 | 345 | 346 |
| A1 | | | | | | | | 4.25 | 0.9 | | 350 | 351 | 352 |
| A2 | | | | | | | | | 1.1 | | 195 | 196 | 197 |
| A3 | | | | | | | | | 1.25 | | 189 | 190 | 191 |
| A4 | | | | ↓ | ↓ | | | ↓ | 1.4 | | 183 | 184 | 185 |
| A5 | | | | N | N | | | 3.4 | 0.6 | | 347 | 348 | 349 |
| A6 | | | | | | | | 4.25 | 0.9 | | 353 | 354 | 355 |
| A7 | | | | | | | | | 1.1 | | 198 | 199 | 200 |
| A8 | ↓ | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 1.25 | | 192 | 193 | 194 |

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

TABLE II. - Continued.

TEST: IA8C | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE:

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. α | SCHD. β | SRB | SSME | SEI | SEO | RN | M | NO. OF RUNS | ANGLE-OF-ATTACK -4 | ANGLE-OF-ATTACK 0 | ANGLE-OF-ATTACK 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RE4OA9 | ΦTS | | B | N | N | 0 | 4 | 4.25 | 1.4 | | 186 | 187 | 188 |
| B0 | | | | N | #2 OUT | 0 | 0 | 3.4 | 0.6 | | 362 | 363 | 364 |
| B1 | | | | | | | | 4.25 | 0.9 | | 365 | 366 | 367 |
| B2 | | | | | | | | | 1.1 | | 207 | 208 | 209 |
| B3 | | | | | | | | | 1.25 | | 204 | 205 | 206 |
| B4 | | | | | | | | | 1.4 | | 201 | 202 | 203 |
| B5 | | | | N | #1 OUT | | | 3.4 | 0.6 | | 356 | 357 | 358 |
| B6 | | | | | | | | 4.25 | 0.9 | | 359 | 360 | 361 |
| B7 | | | | | | | | | 1.1 | | 216 | 217 | 218 |
| B8 | | | | | | | | | 1.25 | | 213 | 214 | 215 |
| B9 | | | | | | | | | 1.4 | | 210 | 211 | 212 |
| C0 | ΦTS W/ET BASESPOLER | | | OFF | OFF | | | | 0.9 | | 377 | 375 | 376 |
| C1 | | | | | | | | | 1.1 | | 368 | 369 | 370 |
| C2 | | | | N | N | | | | 0.9 | | 378 | 379 | 380 |
| C3 | | | | | | | | | 1.1 | | 371 | 372 | 373 |

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS | IDVAR (1) | IDVAR (2) | NDV

α OR β SCHEDULES

TABLE II. - Concluded.

| DATASETS | IDVAR(1) | IDVAR(2) | COEFFICIENTS |
|---|---|---|---|
| RE40XX | ALPHA | BETA | CBMW, CTMW, CNW, CHEI, CHEO, CBMV, CTMV, CYV, CHR, MACH |
| EE4XXX | ALPHA | BETA | XWCP, YWCP, XVCP, ZVCP |
| AE4XXX | ALPHA | BETA | CP379, CP717, CP380, CP718, CP381, CP716, CP720, CP719, CP374, CP376 |
| BE4XXX | ALPHA | BETA | CP2, CP4, CP6, CP8, CP12, CP14, CP18, CP20 |
| CE4XXX | ALPHA | BETA | CP29, CP31, CP35, CP37, CP30, CP32, CP36, CP38 |
| DE4XXX | ALPHA | BETA | CP76, CP78, CP80, CP82, CP75, CP77, CP79, CP81 |
| FE4XXX | ALPHA | BETA | CP378, CP715, CP375, CP377, CP721, CP372, CP714, CP722, CP373, CP713 |
| GE4XXX | ALPHA | BETA | CP723, CP371, CP370, CP724 |
| HE4XXX | ALPHA | BETA | CP22, CP24, CP26, CP28, CP21, CP23, CP25, CP27 |
| IE4XXX | ALPHA | BETA | CP13, CP17, CP19 |
| JE4XXX | ALPHA | BETA | CP39, CP41, CP43, CP45, CP40, CP42, CP44, CP46 |
| KE4XXX | ALPHA | BETA | CP47, CP49, CP53, CP55, CP48, CP50, CP54, CP56 |
| LE4XXX | ALPHA | BETA | CP60, CP62, CP64, CP66, CP59, CP61, CP63, CP65 |
| ME4XXX | ALPHA | BETA | CP68, CP70, CP72, CP74, CP67, CP69, CP71, CP73 |
| RE4CXX | ALPHA | BETA | CP for pressure tap* 9, 10, 15, 16, 33, 34, 51, 54, 57, 58 |
| RE4DXX | ALPHA | BETA | CP for pressure taps* 700, 702, 704, 706, 382, 384, 708, 710, 383, 385 |
| RE4EXX | ALPHA | BETA | CP for pressure taps* 701, 703, 705, 707, 386, 388, 709, 711, 387, 389 |
| RE4GXX | ALPHA | BETA | CP for pressure taps* 518, 805, 800, 521, 806, 801, 804, 807, 802, 515, 808, 803 |
| RE4HXX | ALPHA | BETA | CP for pressure taps* 541, 810, 814, 821, 826, 815, 811, 816, 822, 827, 817, 823, 828, 832, 812, 818, 824, 829, 830, 833, 809, 813, 819, 820, 825, 831, 834 |
| RE4IXX | ALPHA | BETA | CP for pressure taps* 841, 842, 843, 844 |

* See TABLE IV for tap locations.

## Table III Model Dimensional Data

MODEL COMPONENT: ATTACH STRUCTURE - AT 28

GENERAL DESCRIPTION: Rear orbiter to ET attach structure (LH and RH) (2 members)

MODEL SCALE: 0.020 MODEL DRAWING NO.: _____

DRAWING NO.: VL78-000063, VL78-000062B

| DIMENSIONS: | MEMBER | | FULL SCALE | MODEL SCALE |
|---|---|---|---|---|
| | #1 | $X_O$ | 1317.00 | 26.34 |
| | | $Y_O$ | - 96.50 (LH) | - 1.930 |
| | | | 96.50 (RH) | 1.930 |
| | | $Z_O$ | 267.50 | 5.350 |
| | | $X_T$ | 2058.00 | 41.16 |
| | | $Y_T$ | -125.68 (LH) | - 2.514 |
| | | | 125.68 (RH) | 2.514 |
| | | $Z_T$ | 515.5 | 10.310 |
| | #2 | $X_O$ | 1317.00 | 26.34 |
| | | $Y_O$ | - 96.50 (LH) | - 1.930 |
| | | | 96.50 (RH) | 1.930 |
| | | $Z_O$ | 267.50 | 5.350 |
| | | $X_T$ | 1872.00 | 37.44 |
| | | $Y_T$ | -125.68 (LH) | - 2.514 |
| | | | 125.68 (RH) | 2.514 |
| | | $Z_T$ | 504.5 | 10.090 |
| Diameter, In. | #1 | | 11.5 | 0.230 |
| | #2 | | 15.5 | 0.310 |

Table III (Cont'd)

MODEL COMPONENT: ATTACH STRUCTURE - AT 31

GENERAL DESCRIPTION: REAR ET to SRB attach structure (LH and RH). (3 members)

MODEL SCALE: 0.020 MODEL DRAWING: _____

DRAWING NO.: VL78-000063, -000062B, -000066

| DIMENSIONS: | MEMBER | FULL SCALE | MODEL SCALE | |
|---|---|---|---|---|
| $X_T$ | #1 | 2058.00 | 41.16 | |
| $Y_T$ | | -171.50 | - 3.430 | (LH) |
| | | 171.50 | 3.430 | (RH) |
| $Z_T$ | | 457.00 | 9.140 | |
| $X_s$ | | 1511.00 | 41.16 | |
| $Y_s$ | | 53.24 | 1.064 | |
| $Z_s$ | | 57.00 | 1.14 | |
| $X_T$ | #2 | 2058.00 | 41.16 | |
| $Y_T$ | | -163.85 | - 3.277 | |
| $Z_T$ | | 449.81 | 8.996 | |
| $X_s$ | | 1511,00 | 30.22 | |
| $Y_s$ | | 76.56 | 1.531 | |
| $Z_s$ | | 15.73 | 0.315 | |
| $X_T$ | #3 | 2058 | 41.16 | |
| $Y_T$ | | -161.72 | -3.234 | |
| $Z_T$ | | 343.00 | 6.860 | |
| $X_s$ | | 1511.00 | 30.22 | |
| $Y_s$ | | 53.24 | 1.597 | |
| $Z_s$ | | - 57.00 | -1.140 | |
| Diameter of members, In.: | #1 | _____ | _____ | |
| | #2 | _____ | _____ | |
| | #3 | _____ | _____ | |

Table III (Cont'd)

MODEL COMPONENT: ATTACH STRUCTURE - AT32

GENERAL DESCRIPTION: Forward orbiter/ET attach structure (2 members)

MODEL SCALE: 0.020

DRAWING NO.: VL78-000062B, Martin Marietta 8260020914

| DIMENSIONS: | MEMBER | | FULL SCALE | MODEL SCALE |
|---|---|---|---|---|
| | Member #1 | $X_o$ | 388.15 | 7.763 |
| | | $Y_o$ | 0 | 0 |
| (Attach point on Orbiter $Z_T$ 614) | | $Z_o$ | LWR ML | LWR ML |
| | | $X_T$ | 1129.9 | 22.598 |
| | | $Y_T$ | 46.50 | 9.300 |
| (Attach point on Tank) | | $Z_T$ | 562.58 | 11.251 |
| | #2 | $X_o$ | 388.15 | 7.763 |
| | | $Y_o$ | 0 | 0 |
| | | $Z_o$ | LWR ML | LWR ML |
| | | $X_T$ | 1129.9 | 22.598 |
| | | $Y_T$ | -46.50 | -0.930 |
| | | $Z_T$ | 562.58 | 11.252 |
| Diameter, In. | #1 | | 6.00 | 0.120 |
| | #2 | | 6.00 | 0.120 |

Table III (Cont'd)

MODEL COMPONENT : BODY $B_{62}$

GENERAL DESCRIPTION : Configuration 140C orbiter fuselage, MCR 200-R4. Similar to 140A/B fuselage except aft body revised and improved midbody-wing-boot fairing, $X_o$ = 940 to $X_o$ = 1040.

MODEL SCALE: 0.020

DRAWING NUMBER : VL70-000140C, -000202C, -000205A -000200B, -000203

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|---|---|---|
| Length (IML: Fwd Sta $X_o$=238), In. | 1290.3 | 25.806 |
| Length(OML: Fwd Sta $X_o$=235), In. | 1293.3 | 25.866 |
| Max Width (At $X_o$ = 1528.3), In. | 264.0 | 5.280 |
| Max Depth (At $X_o$ = 1464), In. | 250.0 | 5.00 |
| Fineness Ratio | 4.899 | 4.899 |
| Area - $Ft^2$ | | |
| Max. Cross-Sectional | 340.885 | 0.136 |
| Planform | | |
| Wetted | | |
| Base | | |

Table III (Cont'd)

MODEL COMPONENT : CANOPY - $C_{12}$

GENERAL DESCRIPTION : Configuration 140C orbiter canopy. Vehicle Cabin No. 31 updated to MCR 200-R4. Used with Fuselage $B_{62}$.

MODEL SCALE: 0.020

DRAWING NUMBER : VL70-000140C, -000202B, -000204

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|---|---|---|
| Length ($X_o$ = 434.643 to 578), In. | 143.357 | 2.867 |
| Max Width (At $X_o$ = 513.127), In. | 152.412 | 3.048 |
| Max Depth (At $Z_o$ = 501 to 449.39), In. | 51.61 | 1.032 |
| Fineness Ratio | | |
| Area | | |
| Max. Cross-Sectional | | |
| Planform | | |
| Wetted | | |
| Base | | |

Table III (Cont'd)

MODEL COMPONENT: ELEVON - $E_{52}$

GENERAL DESCRIPTION: Elevon for configuration 140C. Hingeline at $X_o$ = 1387, elevon split line $X_w$ = 312.5, 6.0" gaps, beveled edges, and centerbodies.

MODEL SCALE: 0.020

DRAWING NUMBER: VL70-000140C, -006089, -006092, SS-A01260

| DIMENSIONS: | FULL-SCALE | MODEL SCALE |
|---|---|---|
| Area - $Ft^2$ | 210.0 | 0.084 |
| Span (equivalent) , In. | 349.2 | 6.984 |
| Inb'd equivalent chord , In. | 118.0 | 2.360 |
| Outb'd equivalent chord , In. | 55.19 | 1.104 |
| Ratio movable surface chord/ total surface chord | | |
| At Inb'd equiv. chord | 0.2096 | 0.2096 |
| At Outb'd equiv. chord | 0.4004 | 0.4004 |
| Sweep Back Angles, degrees | | |
| Leading Edge | 0.0 | 0.0 |
| Tailing Edge | -10.056 | -10.056 |
| Hingeline | 0.0 | 0.0 |
| Area Moment (Product of area & $\bar{c}$) , $Ft^3$ | 1587.25 | 0.0127 |
| Mean Aerodynamic Chord, In. | 90.7 | 1.814 |
| Hingeline dihedral (origin at $Z_o$ = 261.3509), deg.) | 5.229 | 5.229 |

Table III (Cont'd)

MODEL COMPONENT : BODY FLAP - $F_{10}$

GENERAL DESCRIPTION : Configuration 140C body flap. Hingeline located at $X_o$ = 1532, $Z_o$ = 287.

MODEL SCALE: 0.020

DRAWING NUMBER : VL70-000140C, -355114

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|---|---|---|
| Length($X_o$ = 1525.5 to 1613), In. | 87.50 | 1.750 |
| Max Width (At L.E., $X_o$ = 1525.5) In. | 256.00 | 5.12 |
| Max Depth ($X_o$ = 1532.0 ), In. | 19.798 | 0.594 |
| Fineness Ratio | | |
| Area - $Ft^2$ | | |
| Max. Cross-Sectional (At H.L.) | 35.196 | 0.0317 |
| Planform | 135.00 | 0 1215 |
| Wetted | | |
| Base ($X_o$ = 1613) | 4.89 | 0.0044 |

Table III (Cont'd)

MODEL COMPONENT: FEEDLINE - $FL_{10}$

GENERAL DESCRIPTION: $LH_2$ feedline on upper left-hand side of $T_{28}$.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B

| DIMENSIONS: | | FULL SCALE | NNMODEL SCALE |
|---|---|---|---|
| Leading edge at: | $X_T$ | 2071.5 | 41.430 |
| | $Y_T$ | - 70.00 | -1.400 |
| | $Z_T$ | 573.934 | 11.479 |
| Trailing edge at: | $X_T$ | 2081.8 | 41.636 |
| | $Y_T$ | - 70.00 | -1.400 |
| | $Z_T$ | 584.059 | 11.681 |
| Diameter of line (17.0 I.D.) | | 18.160 | 0.363 |

Table III (Cont'd)

MODEL COMPONENT: FEEDLINE - $FL_{11}$

GENERAL DESCRIPTION: $LO_2$ feedline on upper right-hand of $T_{28}$

MODEL SCALE: 0.020

DRAWING NUMBER: VL78-000063, -000062B

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Leading edge at: | $X_T$ | 1000.667 | 20.013 |
| | $Y_T$ | 70.00 | 1.400 |
| | $Z_T$ | 150.519 | 3.010 |
| Trailing edge at: | $X_T$ | 2071.5 | 41.430 |
| | $Y_T$ | 70.00 | 1.400 |
| | $Z_T$ | 573.934 | 11.479 |
| Diameter of line (17.0 I.D.) | | 18.16 O.D. | 0.363 |

Table III (Cont'd)

MODEL COMPONENT: FAIRING - $FR_{10}$

GENERAL DESCRIPTION: Umbilical door fairing between aft ET/Orbiter attach structure.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Leading edge at: | $X_T$ | 2052.0 | 41.04 |
| Length | | 193.0 | 3.86 |
| Width | | 15.00 | 0.300 |

Table III (Cont'd)

MODEL COMPONENT : OMS POD - $M_{16}$

GENERAL DESCRIPTION : Configuration 140C orbiter OMS pod - short pod.

MODEL SCALE: 0.020

DRAWING NUMBER : VL70-008401, -008410

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|---|---|---|
| Length (OMS Fwd Sta $X_o$ =1310.5), In. | 258.50 | 5.170 |
| Max Width (At $X_o$ = 1511), In. | 136.8 | 2.736 |
| Max Depth (At X = 1511), In. | 74.70 | 1.474 |
| Fineness Ratio | 2.484 | 2.484 |
| Area - $Ft^2$ | | |
| Max. Cross-Sectional | 58.864 | 0.024 |
| Planform | | |
| Wetted | | |
| Base | | |

Table III (Cont'd)

MODEL COMPONENT: MPS NOZZLES - $N_{87}$

GENERAL DESCRIPTION: Flow-through MPS nozzles.

MODEL SCALE: 0.020

DRAWING NUMBER: SS-A01279

| DIMENSIONS: | FULL SCALE | MODEL SCALE |
|---|---|---|
| MACH NO. 1.55, 2.0, 2.2, 2.6, 3.0, 3.5 | | |
| Length - In. | | |
| Gimbal Point to Exit Plane | 157.0 | 3.140 |
| Throat to Exit Plane | 181.55 | 3.361 |
| Diameter - In. | | |
| Exit | 90.435 | 1.809 |
| Throat | 23.350 | 0.467 |
| Inlet | | |
| Area - $ft^2$ | | |
| Exit | 44.607 | 0.178 |
| Throat | 2.974 | 0.00198 |
| Gimbal Point (Station) - In. | | |
| Upper Nozzle | | |
| $X_o$ | 1445.00 | 28.90 |
| $Y_o$ | 0.0 | 0.0 |
| $Z_o$ | 443.00 | 8.86 |
| Lower Nozzles | | |
| $X_o$ | 1468.17 | 29.363 |
| $Y_o$ | ±53.0 | ±1.06 |
| $Z_o$ | 342.64 | 6.853 |
| Null Position - Deg. | | |
| Upper Nozzle | | |
| Pitch | 16 | 16 |
| Yaw | 0 | 0 |
| Lower Nozzle | | |
| Pitch | 10 | 10 |
| Yaw | 0 | 0 |



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Table III (Cont'd)

MODEL COMPONENT: SRB NOZZLE - $N_{88}$

GENERAL DESCRIPTION: Flow-through SRB nozzle simulator = 7.0 prototype.

MODEL SCALE: 0.020

DRAWING NUMBER: SS-A01281

| DIMENSIONS: | FULL SCALE | MODEL SCALE |
|---|---|---|
| MAC [illegible] 1.55, 2.0, 2.2, 2.6, 3.0, 3.5 | | |
| Leng[illegible] . | | |
| Gimbal Point to Exit Plane | 86.8 | 1.736 |
| Throat to Exit Plane | 112.135 | 2.243 |
| Diameter - In. | | |
| Exit | 114.290 | 2.886 |
| Throat | 64.53 | 1.291 |
| Inlet | | |
| Area - $ft^2$ | | |
| Exit | 356.738 | 0.143 |
| Throat | 22.712 | 0.009 |
| Gimbal Point (Station) - In. | | |
| $X_B$ | 1902.6 | 38,052 |
| $Y_B$ | 250.2 | 5.010 |
| Z | | |
| Lower Nozzles | | |
| X | | |
| Y | | |
| Z | | |
| Null Position - Deg. | | |
| Pitch | 0 | 0 |
| Yaw | 0 | 0 |
| Lower Nozzle | | |
| Pitch | | |
| Yaw | | |

Table III (Cont'd)

MODEL COMPONENT: OMS NOZZLES - $N_{89}$

GENERAL DESCRIPTION: OMS nozzle in stowed position which is outboard 8 deg. and down 7 deg. from null position. Use with $M_{16}$.

MODEL SCALE: 0.020

DRAWING NUMBER: SS-A01279

| DIMENSIONS: | FULL SCALE | MODEL SCALE |
|---|---|---|
| MACH NO. | | |
| Length - In. | | |
| Gimbal Point to Exit Plane | 56.0 | 1.12 |
| Throat to Exit Plane | | |
| Diameter - In. | | |
| Exit (.O.D.) | 50.0 | 1.00 |
| Throat | | |
| Inlet | | |
| Area - $ft^2$ | | |
| Exit | | |
| Throat | | |
| Gimbal Point (Station) - In. | | |
| $X_o$ | 1518.00 | 30.360 |
| $Y_o$ | 88.00 | 1.76 |
| $Z_o$ | 492.0 | 9.84 |
| Lower Nozzles | | |
| X | | |
| Y | | |
| Z | | |
| Null Position - Deg. | | |
| Pitch | 15°49' | 15°49' |
| Yaw | 6°30' | 6°30' |
| Lower Nozzle | | |
| Pitch | | |
| Yaw | | |

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Table III (Cont'd)

MODEL COMPONENT: NOZZLES - $N_{104}$

GENERAL DESCRIPTION: Flow-through MPS nozzles with gimbal capability. Same as $N_{87}$, except that these nozzles have contoured interior, the exterior same as $N_{87}$ when shroud is attached.

MODEL SCALE: 0.020

DRAWING NUMBER: SS-A01261

| DIMENSIONS: | FULL SCALE | MODEL SCALE |
|---|---|---|
| MACH NO. | | |
| Length - In. | | |
| Gimbal Point to Exit Plane | 157.00 | 3.14 |
| Throat to Exit Plane | 119.69 | 2.394 |
| Diameter - In. | | |
| Exit | 90.435 | 1.809 |
| Throat | 30.140 | 0.603 |
| Inlet | | |
| Area - $ft^2$ | | |
| Exit | 44.607 | 0.0178 |
| Throat | 4.955 | 0.00198 |
| Gimbal Point (Station) - In. | | |
| Upper Nozzle | | |
| $X_o$ | 1445.00 | 28.90 |
| $Y_o$ | 0.0 | 0.0 |
| $Z_o$ | | |
| Lower Nozzles | | |
| $X_o$ | 1468.17 | 29.3634 |
| $Y_o$ | 53.0 | 1.06 |
| $Z_o$ | 342.64 | 6.853 |
| Null Position - Deg. | | |
| Upper Nozzle | | |
| Pitch | 16 | 16 |
| Yaw | 0 | 0 |
| Lower Nozzle | | |
| Pitch | 10 | 10 |
| Yaw | OUTBD $3^{\circ}30'$ | OUTBD $3^{\circ}30'$ |



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Table III (Cont'd)

MODEL COMPONENT : ELECTRICAL TUNNEL - $PS_{11}$

GENERAL DESCRIPTION : Tunnel running longitudinally on the SRB for electrical wires.

MODEL SCALE: 0.020

DRAWING NUMBER : VC77-000002

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|---|---|---|
| Width, In. | 5.70 | 0.114 |
| Radius, In. | 5.70 | 0.114 |
| Height, In | 4.70 | 0.094 |
| L.E. at Sta. | 494.70 | 9.894 |
| L.E. sweepback angle, Deg. | 30.0 | 30.0 |
| Max. Cross-Sectional | | |
| Planform | | |
| Wetted | | |
| Base | | |

Table III (Cont'd)

MODEL COMPONENT: ELECTRICAL TUNNEL - $PS_{12}$

GENERAL DESCRIPTION: Four ring stiffeners located at the aft end of the solid rocket boosters. The stiffener is a curved I-beam.

MODEL SCALE: 0.020

DRAWING NO.: VC77-000002

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Height, In. | | 2.5 | 0.050 |
| Length, In. | | 2.0 | 0.04 |
| Locations: | $X_B$ = | 1602.00 | 32.04 |
| | | 1644.00 | 32.88 |
| | | 1729.00 | 34.58 |
| | | 1771.00 | 35.42 |

Table III (Cont'd)

MODEL COMPONENT: CIRCUMFERENTIAL STIFFENER - $PS_{13}$

GENERAL DESCRIPTION: Ring stiffener located at the point where the skirt flares. The stiffener is I-beam.

MODEL SCALE: 0.020

DRAWING NO.: VC77-000002

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Height, In. | | 6.50 | 0.130 |
| Length, In. | | 4.00 | 0.080 |
| Location centerline | $X_B$ | 1833.70 | 36.674 |

Table III (Cont'd)

MODEL COMPONENT: SOLID ROCKET BOOSTER - EXTERNAL TANK ATTACH - $PS_{14}$

GENERAL DESCRIPTION: Two-ring stiffeners located at aft end of solid rocket boosters. The stiffener is curved I-beam.

MODEL SCALE: 0.020

DRAWING NO.: VC77-000002

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Height, In. | | 8.00 | 0.160 |
| Length, In. | | 3.00 | 0.060 |
| Location centerline | $X_B$ | 1511.00 | 30.22 |

Table III (Cont'd)

MODEL COMPONENT: SRB PROTUBERANCES - $PS_{17}$

GENERAL DESCRIPTION: Electrical connecting box mounted on top of $PS_{14}$.

MODEL SCALE: 0.020

DRAWING NO.: None

| DIMENSIONS: | FULL SCALE | MODEL SCALE |
|---|---|---|
| Width, In. | 60.00 | 1.200 |
| Depth, In. | 17.5 | 0.350 |

Centerline of box located 15 deg inboard from vertical plane of symmetry.

Table III (Cont'd)

MODEL COMPONENT: SRB PROTUBERANCE - $PS_{18}$

GENERAL DESCRIPTION: Tie-down fixtures mounted on the aft skirt. Total of four founted 30 deg. on both sides of vertical plane of symmetry.

MODEL SCALE: 0.020

DRAWING NO.: None

| DIMENSIONS: | FULL SCALE | MODEL SCALE |
|---|---|---|
| Sta. of leading edge ($X_B$) | 1861.2 | 37.224 |
| Sta. of Trailing Edge ($X_B$) | 1925.2 | 38.504 |
| Max. width, In. | 14.2 | 0.284 |
| Height, In. | 8.3 | 0.166 |

Table III (Cont'd)

MODEL COMPONENT: SRB PROTUBERANCES - $PS_{19}$

GENERAL DESCRIPTION: Aft separation motor pod mounted on aft skirt at 20 deg. inboard from top vertical plane of symmetry.

MODEL SCALE: 0.020

DRAWING NO.: None

| DIMENSIONS: | FULL SCALE | MODEL SCALE |
|---|---|---|
| Width, In. | 14.0 | 0.280 |
| Height, In. (at Trailing edge) | 19.0 | 0.380 |
| Sweepback of leading edge, deg. | 15.0 | 15.0 |

Table III (Cont'd)

MODEL COMPONENT: ET PROTUBERANCE - $PT_{12}$

GENERAL DESCRIPTION: Lightning rod attached to ET nose.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000068A

| DIMENSIONS: | FULL SCALE | MODEL SCALE |
|---|---|---|
| Length | 30.90 | 0.618 |
| Diameter, In. | 3.20 | 0.096 |

Table III (Cont'd)

MODEL COMPONENT: ELECTRICAL LINE - $PT_{22}$

GENERAL DESCRIPTION: Left-hand electrical conduit line on $T_{28}$.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, VL78-000062B

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Leading edge at: | $X_T$ | 1084.333 | 21.687 |
| | $Y_T$ | - 99.591 | - 1.992 |
| | $Z_T$ | -139.620 | - 2.794 |
| Trailing edge at: | $X_T$ | 2058.00 | 41.16 |
| | $Y_T$ | - 99.491 | -1.992 |
| | $Z_T$ | -139.620 | -2.794 |
| Conduit size: | | 2.0 x 6.0 | 0.04 x 0.12 |

Centerline of line located radially at $\phi$ = 35.5 deg.

Table III (Cont'd)

MODEL COMPONENT: $LO_2$ RECIRCULATION LINE - $PT_{23}$

GENERAL DESCRIPTION: $LO_2$ recirculation line on right-hand upper side of $T_{28}$.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B , Martin Marietta 82600207000

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Leading edge at: | $X_T$ | 1040.667 | 20.813 |
| | $Y_T$ | 94.169 | 1.883 |
| | $Z_T$ | 540.934 | 11 11.817 |
| Trailing edge at: | $X_T$ | 2062.920 | 41.258 |
| | $Y_T$ | 70.00 | 1.40 |
| | $Z_T$ | 573.934 | 11.479 |
| Diameter of line | | 4.00 | 0.080 |

Centerline of lines located radially at $\phi = 33^{\circ} 45'$

(Right of TDC looking forward).

Table III (Cont'd)

MODEL COMPONENT: $LH_2$ RECIRCULATION LINE - $PT_{24}$

GENERAL DESCRIPTION: $LH_2$ recirculation line on $T_{28}$.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Leading edge at: | $X_T$ | 1040.667 | 20.813 |
| | $Y_T$ | - 94.169 | -1.883 |
| | $Z_T$ | 540.934 | 11.819 |
| Trailing edge at: | $X_T$ | 2062.920 | 41.258 |
| | $Y_T$ | - 70.00 | -1.400 |
| | $Z_T$ | 573.934 | 11.479 |
| Diameter of line | | 4.0 | 0.080 |

Centerline of line located radially at $\phi = 33^{o}45'$

(Left of TDL looking forward).

Table III (Cont'd)

MODEL COMPONENT: ELECTRICAL LINE - $PT_{25}$

GENERAL DESCRIPTION: Right-hand aft electrical conduit line on $T_{28}$ with $LH_2$ pressure sensor line and LOX vent valve actuator line.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Leading edge at: | $X_T$ | 1084.333 | 21.687 |
| | $Y_T$ | 99.591 | 1.992 |
| | $Z_T$ | 139.620 | 2.792 |
| Trailing edge at: | $X_T$ | 2058.000 | 41.16 |
| | $Y_T$ | 99.591 | 1.992 |
| | $Z_T$ | 139.620 | 2.792 |
| Conduit size | | 2.0 x 6.0 | 0.04 x 0.12 |

Centerline of line located radially at $\phi$ = 35.5 deg.

Table III (Cont'd)

MODEL COMPONENT: LOX PRESSURE LINE - $PT_{26}$

GENERAL DESCRIPTION: LOX pressure line on the $T_{28}$.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Leading edge at: | $X_T$ | 360.733 | 7.215 |
| | $Y_T$ | 15.145 | 0.303 |
| | $Z_T$ | 407.718 | 8.154 |
| Trailing edge at: | $X_T$ | 2083.5 | 41.670 |
| | $Y_T$ | 63.25 | 1.265 |
| | $Z_T$ | 609.00 | 12.180 |
| Line diameter | | 2.0 | 0.040 |

Centerline of line located radially at $\phi$ = 27 deg.

Table III (Cont'd)

MODEL COMPONENT: ELECTRICAL LINE - $PT_{27}$

GENERAL DESCRIPTION: Electrical conduit on the right-hand forward section of $T_{28}$.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000062B

| DIMENSIONS: | | FULL SCALE | MODEL SCALE |
|---|---|---|---|
| Leading edge at: | $X_T$ | 360.733 | 7.215 |
| | $Y_T$ | 11.549 | 0.231 |
| | $Z_T$ | 412.474 | 8.250 |
| Trailing edge at: | $X_T$ | 876.273 | 17.525 |
| | $Y_T$ | 226.114 | 4.522 |
| | $Z_T$ | 646.774 | 12.935 |

Centerline of conduit located radially at $\phi$ = 47.5 deg.

Table III (Cont'd)

**MODEL COMPONENT:** RUDDER - $R_5$

**GENERAL DESCRIPTION:** Configuration 140C orbiter rudder (identical to configuration A/B rudder)

MODEL SCALE: 0.020

**DRAWING NUMBER:** VL70-000146B, -000095

| **DIMENSIONS:** | **FULL-SCALE** | **MODEL SCALE** |
|---|---|---|
| Area - $Ft^2$ | 100.15 | 0.004 |
| Span (equivalent) - In. | 201.00 | 4.020 |
| Inb'd equivalent chord - In. | 91.585 | 1.832 |
| Outb'd equivalent chord - In. | 50.833 | 1.017 |
| Ratio movable surface chord/ total surface chord | | |
| At Inb'd equiv. chord | 0.400 | 0.400 |
| At Outb'd equiv. chord | 0.400 | 0.400 |
| Sweep Back Angles, degrees | | |
| Leading Edge | | |
| Tailing Edge | 26.25 | 26.25 |
| Hingeline | 34.83 | 34.83 |
| Area Moment (Product of area & $\bar{c}$), $Ft^3$ | 610.92 | 0.0049 |
| Mean Aerodynamic Chord, In. | 73.2 | 1.464 |

Table III (Cont'd)

MODEL COMPONENT : BOOSTER SOLID ROCKET MOTOR - $S_{22}$

GENERAL DESCRIPTION : The BSRM is an external propulsion system which is jettisoned and recoverable after burnout. The BSRM's can be refurbished and reused after recovery.

MODEL SCALE: 0.020

DRAWING NUMBER : VC77-000002C, VC70-000002A, VC72-000002C

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|---|---|---|
| Length - In. | 1789.60 | 35.792 |
| Max Width (Tank Dia.), In. | 146.00 | 2.92 |
| Max Depth (Aft Shroud Dia.), In. | 208.20 | 4.164 |
| Fineness Ratio | 8.596 | 8.596 |
| Area - $Ft^2$ | | |
| Max. Cross-Sectional | 236.423 | 0.095 |
| Planform | | |
| Wetted | | |
| Base | | |
| WP of BSRM Centerline ($X_T$) | 400.00 | 8.00 |
| FS of BSRM nose ($X_T$) | 743.0 | 14.86 |
| BP of BSRM centerline ($X_T$) | 250.5 | 5.010 |

Table III (Cont'd)

MODEL COMPONENT : EXTERNAL TANK - $T_{28}$

GENERAL DESCRIPTION :

NOTE: Dimensions are to tank structural OML, TPS not included).

MODEL SCALE: 0.020

DRAWING NUMBER : VL72-000143D, VL78-000063

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|---|---|---|
| Length - In. | 1844.275 | 36.886 |
| Max ~~Width~~ Dia. - In. | 331.00 | 6.62 |
| Max Depth | | |
| Fineness Ratio | 5.687 | 5.687 |
| Area - $Ft^2$ | | |
| Max. Cross-Sectional | 594.678 | 0.239 |
| Planform | | |
| Wetted | | |
| Base | | |

Table III (Cont'd)

MODEL COMPONENT: VERTICAL - $V_8$

GENERAL DESCRIPTION: Configuration 140C orbiter vertical tail (identical to configuration 140A/B vertical tail).

MODEL SCALE: 0.020

DRAWING NUMBER: VL70-000140C, -000146B

| DIMENSIONS: | FULL SCALE | MODEL SCALE |
|---|---|---|
| TOTAL DATA | | |
| Area (Theo) - $Ft^2$ | | |
| Planform | 413.253 | 0.165 |
| Span (Theo) - In. | 315.72 | 6.314 |
| Aspect Ratio | 1.675 | 1.675 |
| Rate of Taper | 0.507 | 0.507 |
| Taper Ratio | 0.404 | 0.404 |
| Sweep-Back Angles, Degrees. | | |
| Leading Edge | 45.00 | 45.00 |
| Trailing Edge | 26.25 | 26.25 |
| 0.25 Element Line | 41.13 | 41.13 |
| Chords: | | |
| Root (Theo) WP | 268.50 | 5.370 |
| Tip (Theo) WP | 108.47 | 2.169 |
| MAC | 199.81 | 3.996 |
| Fus. Sta. of .25 MAC | 1463.35 | 29.267 |
| W.P. of .25 MAC | 635.52 | 12.710 |
| B.L. of .25 MAC | 0.0 | 0.0 |
| Airfoil Section | | |
| Leading Wedge Angle - Deg. | 10.00 | 10.0 |
| Trailing Wedge Angle - Deg. | 14.92 | 14.92 |
| Leading Edge Radius | 2.00 | 0.04 |
| Void Area | 13.17 | 0.0053 |
| Blanketed Area | 0.0 | 0.0 |

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Table III (Conl'd)

MODEL COMPONENT: WING-$W_{116}$

GENERAL DESCRIPTION: NOTE: Identical to $W_{114}$ except airfoil thickness. Dihedral angle is along trailing edge of wing. Geometric twist = 0.

MODEL SCALE: 0.020

TEST NO.

DWG. NO. VL70-000140A, -000200

| DIMENSIONS: | FULL-SCALE | MODEL SCALE |
|---|---|---|
| **TOTAL DATA** | | |
| Area (Theo.) $Ft^2$ Planform | 2690.00 | 1.076 |
| Span (Theo In. | 936.68 | 18.734 |
| Aspect Ratio | 2.265 | 2.265 |
| Rate of Taper | 1.177 | 1.177 |
| Taper Ratio | 0.200 | 0.200 |
| Dihedral Angle, degrees | 3.500 | 3.500 |
| Incidence Angle, degrees | 0.500 | 0.500 |
| Aerodynamic Twist, degrees | | |
| Sweep Back Angles, degrees | | |
| Leading Edge | 45.000 | 45.000 |
| Trailing Edge | - 10.056 | - 10.056 |
| 0.25 Element Line | 35.209 | 35.209 |
| Chords: | | |
| Root (Theo) B.P.0.0. | 689.24 | 13.785 |
| Tip, (Theo) B.P. | 137.85 | 2.757 |
| MAC | 474.81 | 9.496 |
| Fus. Sta. of .25 MAC | 1136.83 | 22.737 |
| W.P. of .25 MAC | 290.58 | 5.812 |
| B.L. of .25 MAC | 182.13 | 3.643 |
| **EXPOSED DATA** | | |
| Area (Theo) $Ft^2$ | 1751.50 | 0.701 |
| Span, (Theo) In. BP108 | 720.68 | 14.4136 |
| Aspect Ratio | 2.059 | 2.059 |
| Taper Ratio | 0.245 | 0.245 |
| Chords | | |
| Root BP108 | 562.09 | 11.242 |
| Tip 1.00 $\frac{b}{2}$ | 137.85 | 2.757 |
| MAC | 392.83 | 7.856 |
| Fus. Sta. of .25 MAC | 1185.98 | 23.720 |
| W.P. of .25 MAC | 294.30 | 5.886 |
| B.L. of .25 MAC | 251.77 | 5.035 |
| Airfoil Section (Rockwell Mod NASA) XXXX-64 | | |
| Root $\frac{b}{2}$ = | 0.113 | 0.113 |
| Tip $\frac{b}{2}$ = | 0.120 | 0.120 |
| Data for (1) of (2) Sides | | |
| Leading Edge Cuff Planform Area $Ft^2$ | 113.18 | 0.045 |
| Leading Edge Intersects Fus M. L. @ Sta | 500.00 | 10.00 |
| Leading Edge Intersects Wing @ Sta | 1024.00 | 20.480 |



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TABLE IV. - PRESSURE TAP NUMBER ASSIGNMENTS

ORBITER FUSELAGE

| $X_o$ STA | $Z_o$ W.L | Tap LH | No. RH |
|---|---|---|---|
| 7.60 | 7.08 | — | 2 |
| 8.24 | 7.08 | — | 6 |
| 7.60 | 7.26 | — | 4 |
| 8.24 | 7.26 | — | 8 |
| 15.08 | 7.54 | — | 12 |
| 15.48 | 7.54 | 17 | 18 |
| 15.08 | 7.76 | 13 | 14 |
| 15.48 | 7.76 | 19 | 20 |
| 18.48 | 7.02 | 29 | 30 |
| 18.90 | 7.02 | 35 | 36 |
| 18.48 | 7.24 | 31 | 32 |
| 18.90 | 7.24 | 37 | 38 |

| $X_o$ STA | $Z_o$ WL | Tap LH | No RH |
|---|---|---|---|
| 17.90 | 7.54 | 21 | 22 |
| 18.30 | 7.54 | 25 | 26 |
| 17.90 | 7.76 | 23 | 24 |
| 18.30 | 7.76 | 27 | 28 |
| 19.70 | 7.54 | 39 | 40 |
| 20.10 | 7.54 | 43 | 44 |
| 19.70 | 7.76 | 41 | 42 |
| 20.10 | 7.76 | 45 | 46 |
| 22.36 | 7.54 | 47 | 48 |
| 22.76 | 7.54 | 53 | 54 |
| 22.36 | 7.76 | 49 | 50 |
| 22.76 | 7.76 | 55 | 56 |

| $X_o$ STA | $Z_o$ WL | Tap LH | No RH |
|---|---|---|---|
| 27.62 | 6.72 | 75 | 76 |
| 28.02 | 6.72 | 79 | 80 |
| 27.62 | 6.98 | 77 | 78 |
| 28.02 | 6.98 | 81 | 82 |
| 26.84 | 6.72 | 59 | 60 |
| 27.08 | 6.72 | 63 | 64 |
| 26.84 | 6.86 | 61 | 62 |
| 27.08 | 6.86 | 65 | 66 |
| 27.40 | 6.18 | 67 | 68 |
| 27.54 | 6.18 | 71 | 72 |
| 27.40 | 6.28 | 69 | 70 |
| 27.54 | 6.28 | 73 | 74 |

ORB. FUS. RADIAL LOCATIONS

| $\phi$ \ $X_o$ | 11.40 | 15.20 | 18.84 | 22.50 | 26.14 |
|---|---|---|---|---|---|
| 120 | 10 | 16 | 34 | 52 | 58 |
| 240 | 9 | 15 | 33 | 51 | 57 |

ORB. BODY FLAP - UPPER SURFACE

| $X_o$ | $Y_o$ (B.L) | | | | |
|---|---|---|---|---|---|
| STA | -1.89 | -0.82 | 0.0 | 0.82 | 1.89 |
| 31.10 | 700 | 704 | 382 | 708 | 383 |
| 31.80 | 702 | 706 | 384 | 710 | 385 |

ORB. BODY FLAP - LWR SURFACE

| $X_o$ | $Y_o$ (B.L.) | | | | |
|---|---|---|---|---|---|
| STA | -1.89 | -0.82 | 0.0 | 0.82 | 1.89 |
| 31.10 | 701 | 705 | 386 | 709 | 387 |
| 31.80 | 703 | 707 | 388 | 711 | 389 |

TABLE IV. - Concluded.

ORBITER BASE

| $Y_o$ BL | $Z_o$ WL | Tap No. |
|---|---|---|
| -2.30 | 6.59 | 379 |
| -.438 | 6.10 | 717 |
| 0.00 | 6.59 | 380 |
| .438 | 6.10 | 718 |
| 2.30 | 6.59 | 381 |
| -2.30 | 7.15 | 716 |
| 0.00 | 7.15 | 720 |
| 2.30 | 7.15 | 719 |
| -2.30 | 8.00 | 374 |

| $Y_o$ BL | $Z_o$ WL | Tap No. |
|---|---|---|
| 0.00 | 7.72 | 376 |
| 2.30 | 8.00 | 378 |
| -2.09 | 8.38 | 715 |
| -.87 | 8.21 | 375 |
| .87 | 8.21 | 377 |
| 2.09 | 8.38 | 721 |
| -2.45 | 8.88 | 372 |
| -1.73 | 8.70 | 714 |
| 1.73 | 8.70 | 722 |

| $Y_o$ BL | $Z_o$ WL | Tap No. |
|---|---|---|
| 2.45 | 8.88 | 373 |
| -1.77 | 9.18 | 713 |
| 1.77 | 9.18 | 723 |
| -1.00 | 10.0 | 371 |
| 1.00 | 10.0 | 370 |
| 1.9 | 9.92 | 724 |

EXTERNAL TANK

| $X_T$ STA | φ DEG. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| 19.0 | | 800 | | 801 | | 802 | | 803 |
| 38.0 | 518 | | 521 | | 804 | | 515 | |
| 41.16 | 805 | | 806 | | 807 | | 808 | |

ET BASE

| R/ROD | φ | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| 0 | 541 | | | | | | | |
| 0.45 | | | | | | | 809 | |
| .635 | 810 | | 811 | | 812 | | 813 | |
| .840 | 814 | 815 | 816 | 817 | 818 | | 819 | 820 |
| .895 | 821 | | 822 | 823 | 824 | | | 825 |
| .946 | 826 | | 827 | 828 | 829 | 830 | | 831 |
| 1.00 | | | | 832 | | 833 | | 834 |

SRB (Inside Skirt)

| $X_B$ STA | φ | | | |
|---|---|---|---|---|
| | 0 | 90 | 180 | 270 |
| 380 | 841 | 842 | 843 | 844 |

Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

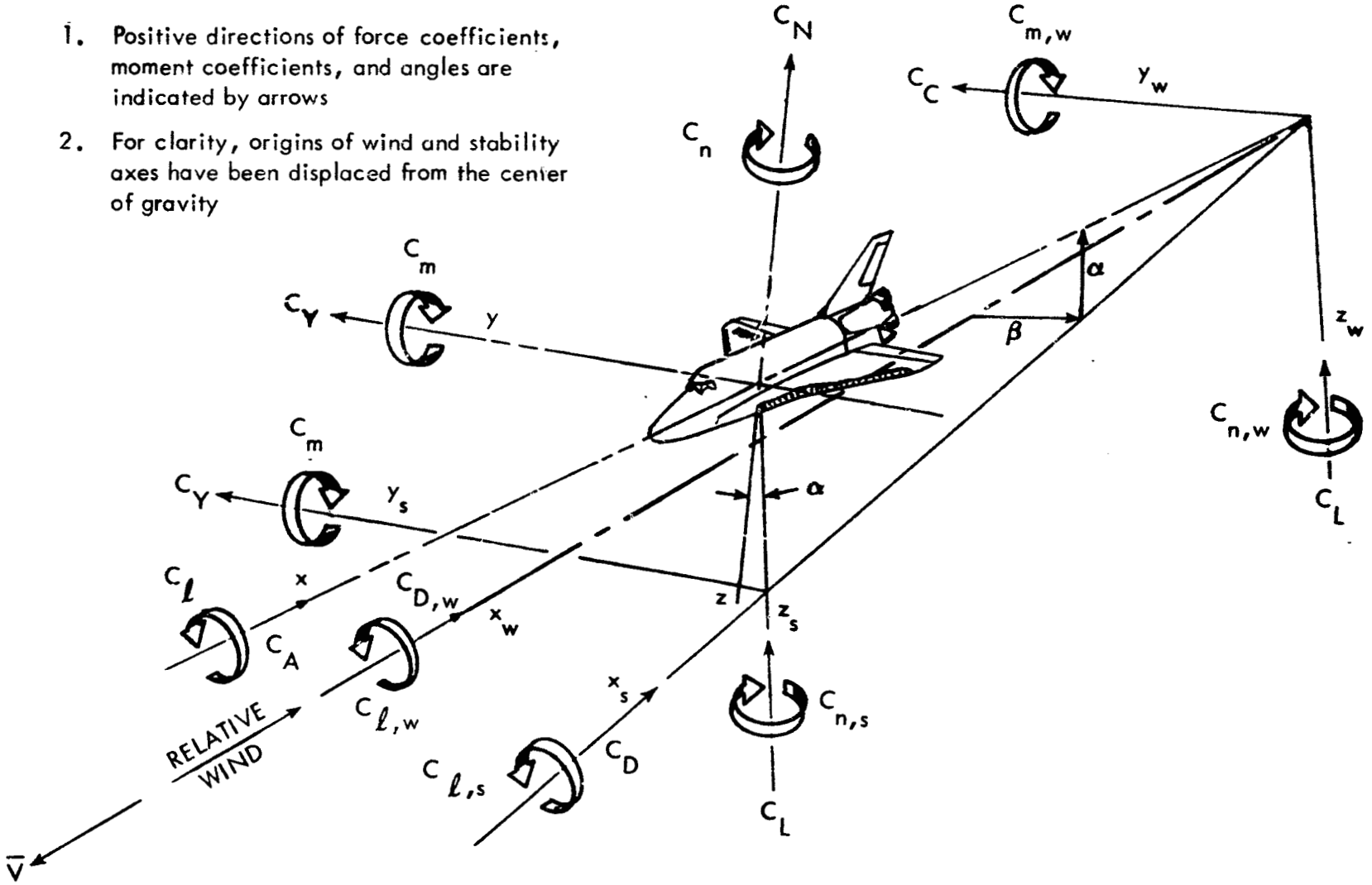


Figure 1. - Axis systems.

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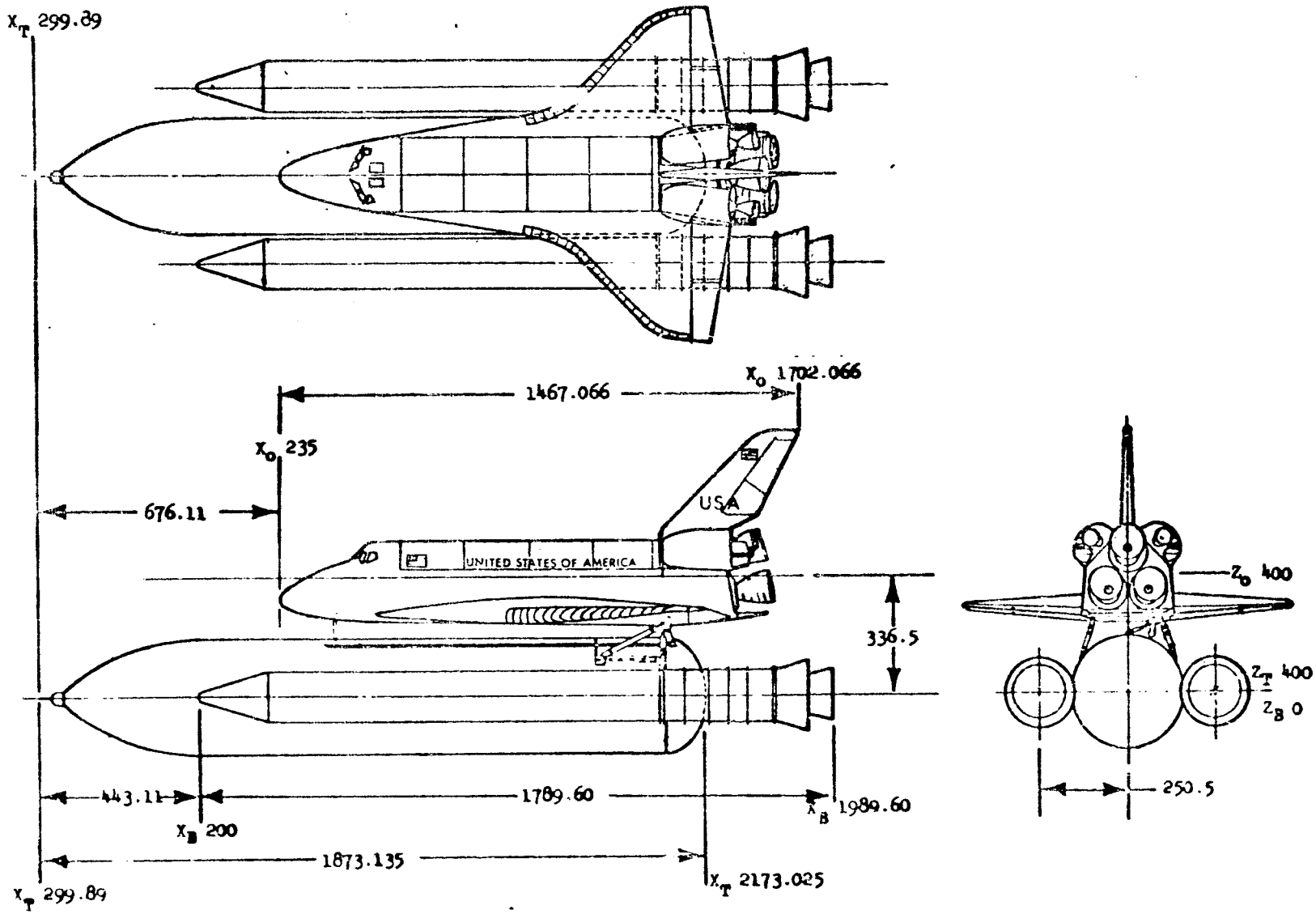


Figure 2. - Integrated space shuttle vehicle launch configuration.

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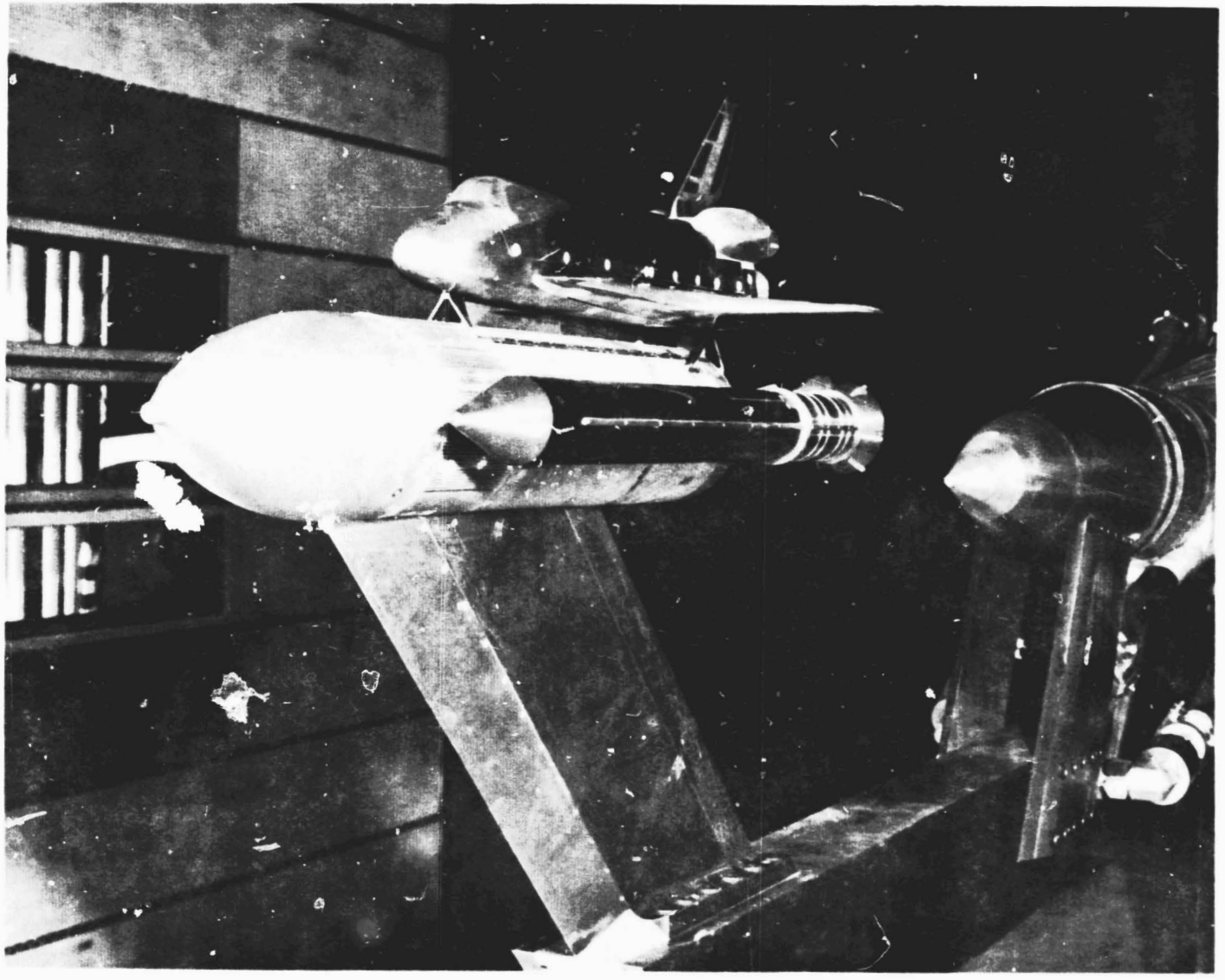

a. Model 88-OTS Installation, Front View

Figure 3. - Model photographs.

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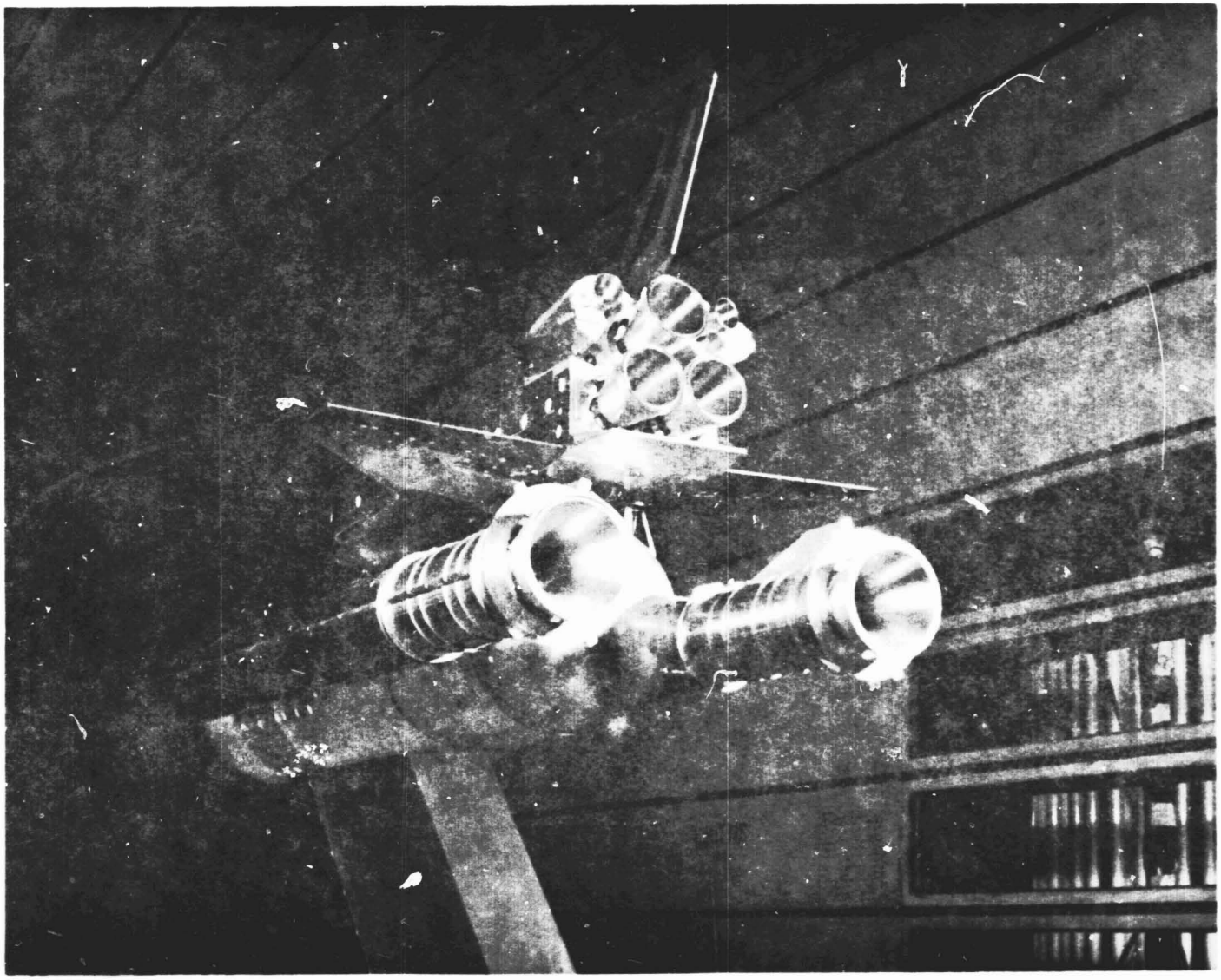

b. Model 88-01S Installation, Rear View

Figure 3. - Concluded.



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DATA FIGURES

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4XA0) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .600 | 3.400 |
| (RE4X90) | ⊠ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4X74) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

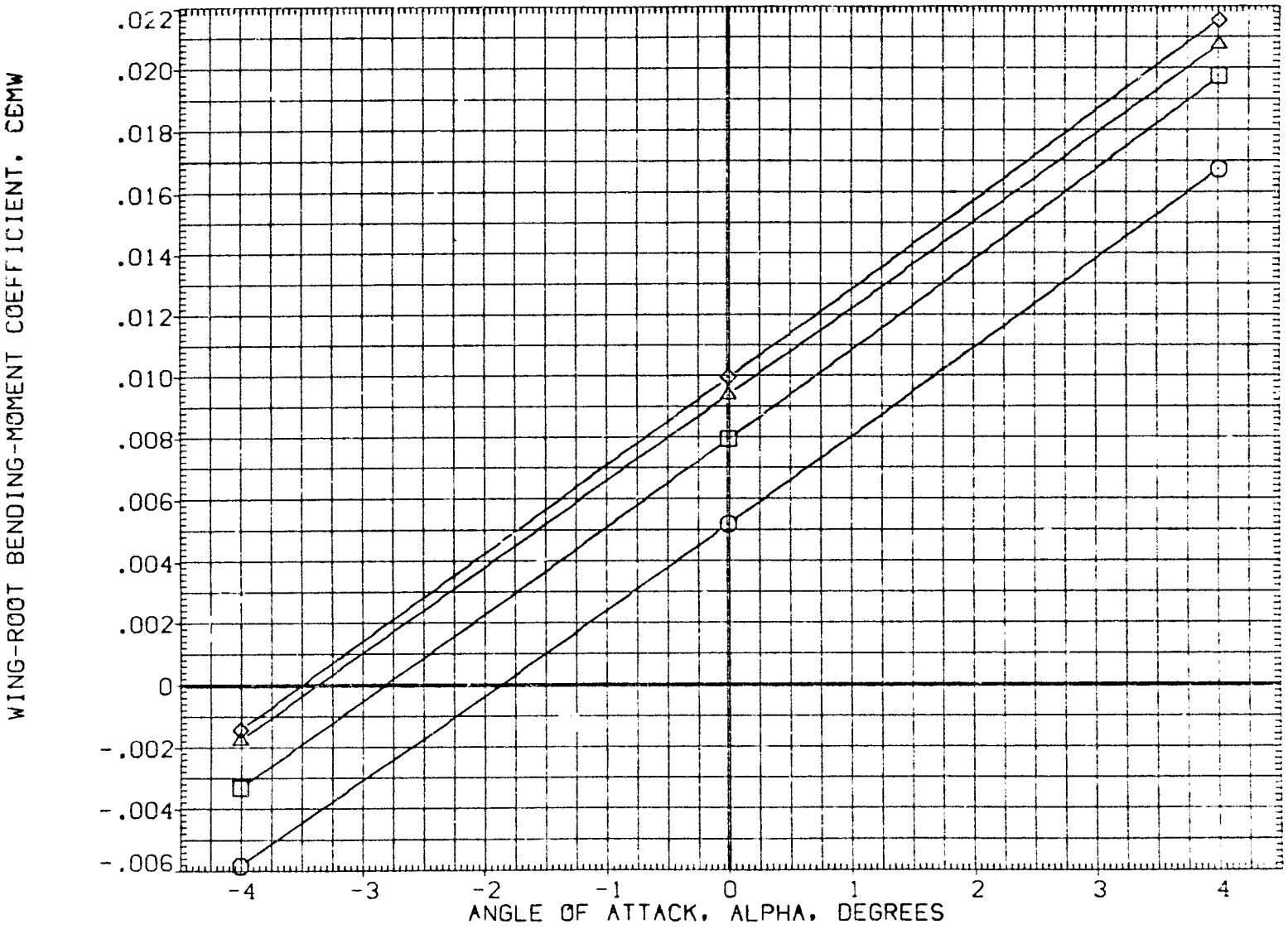


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4XA0) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .600 | 3.400 |
| (RE4X90) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4X74) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
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| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

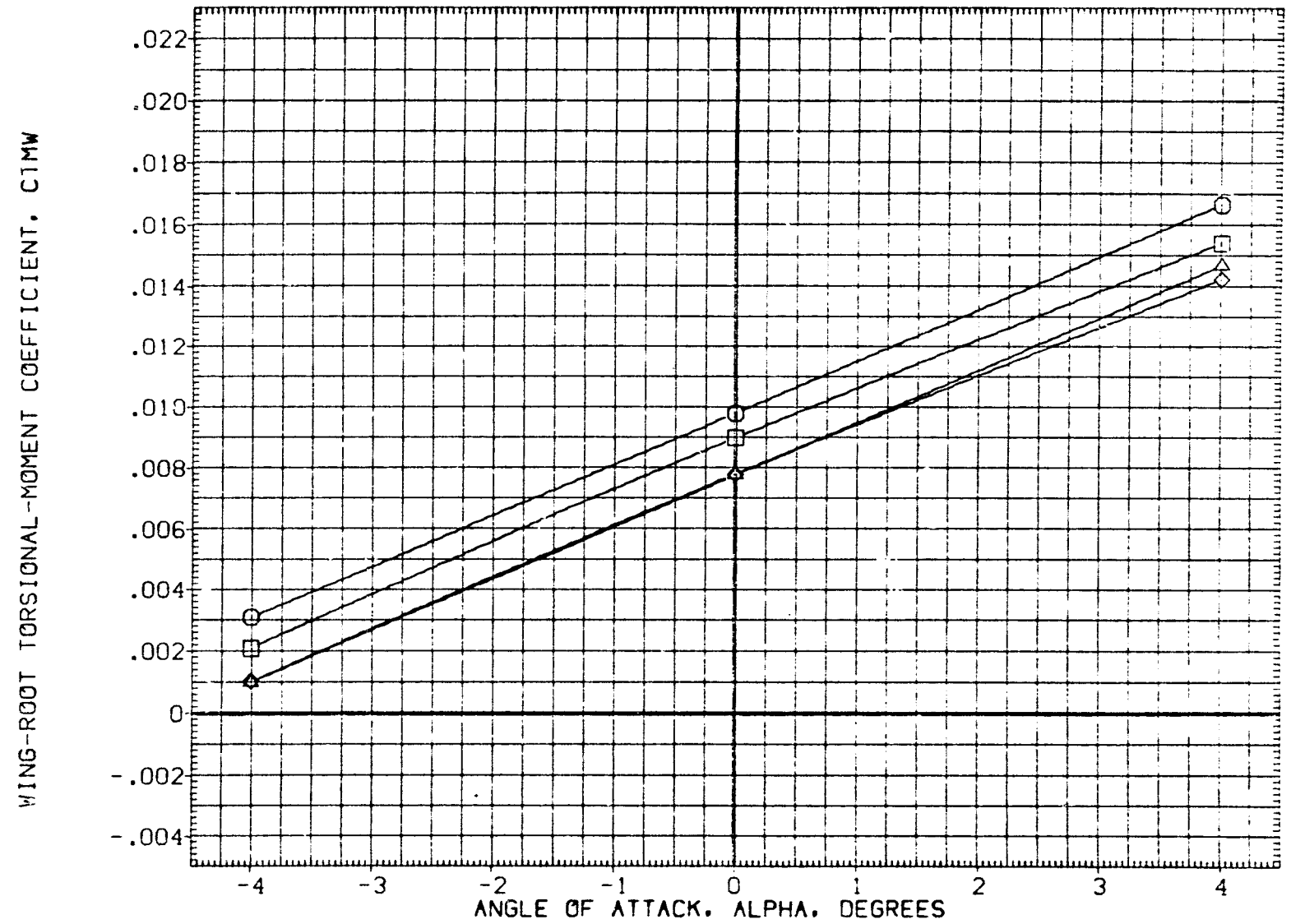


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4XA0) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .600 | 3.400 |
| (RE4X90) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4X74) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
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| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

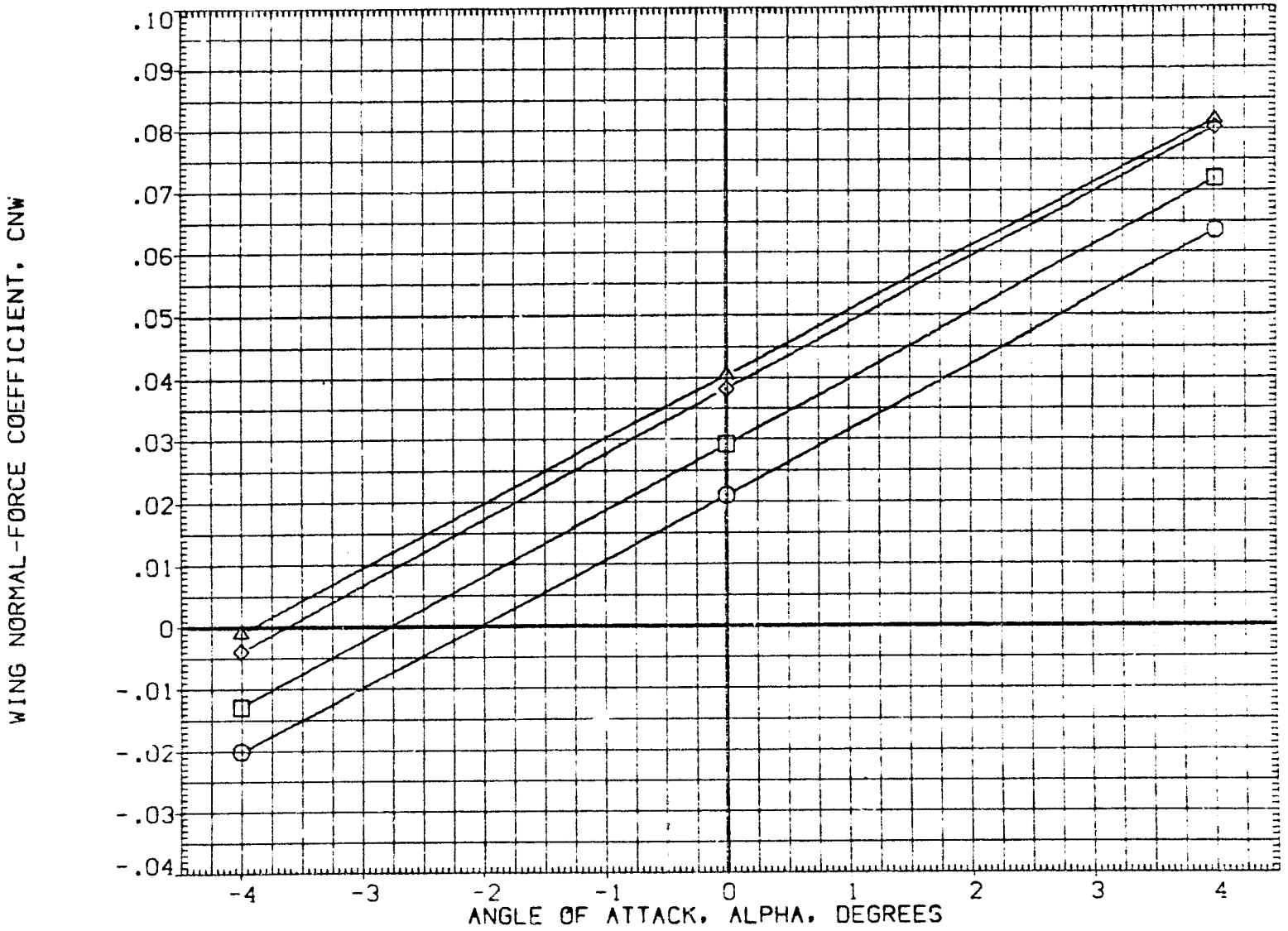


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X84) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4X53) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4X64) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
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| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

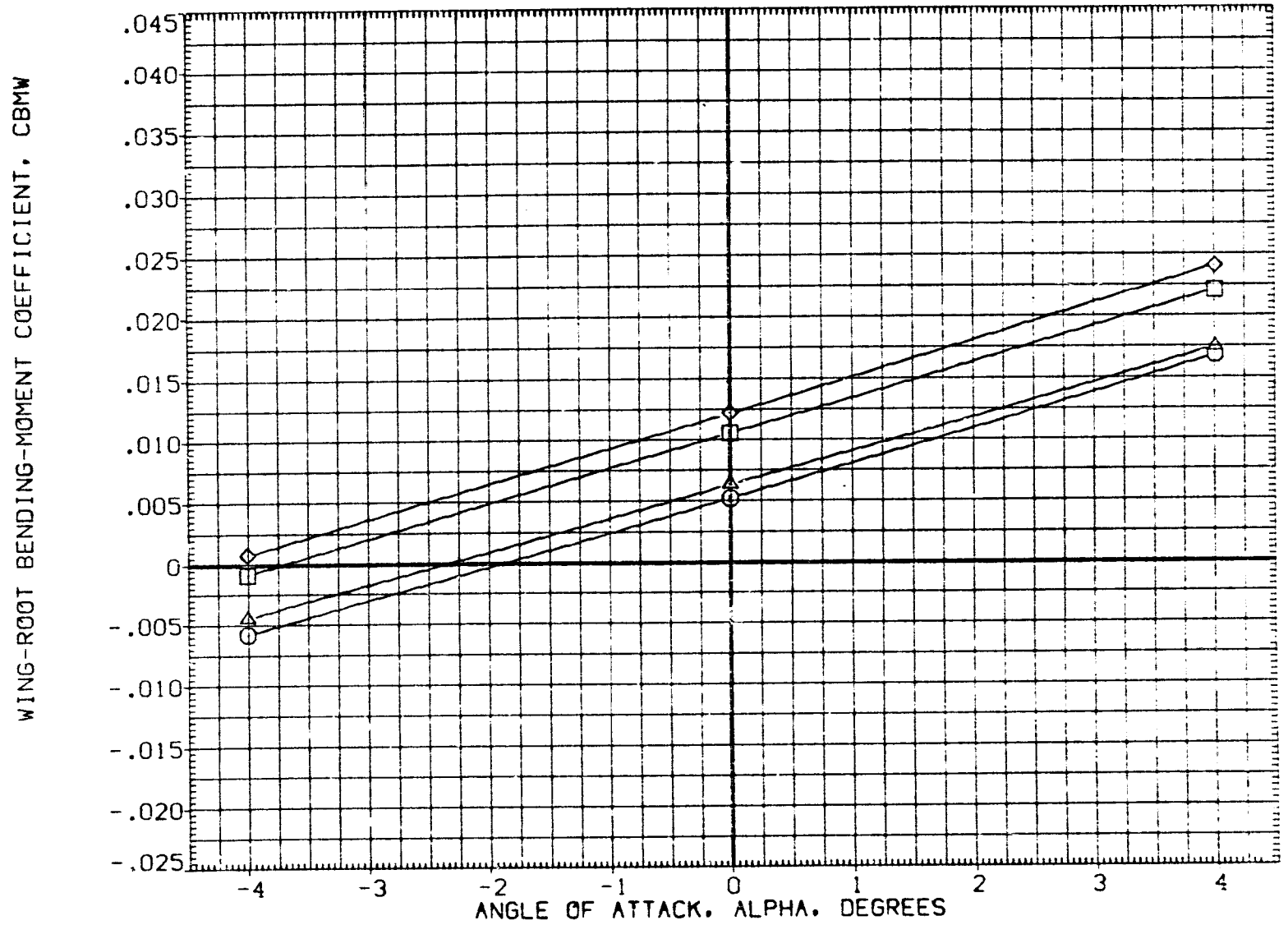


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X84) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4X53) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4X64) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
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| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

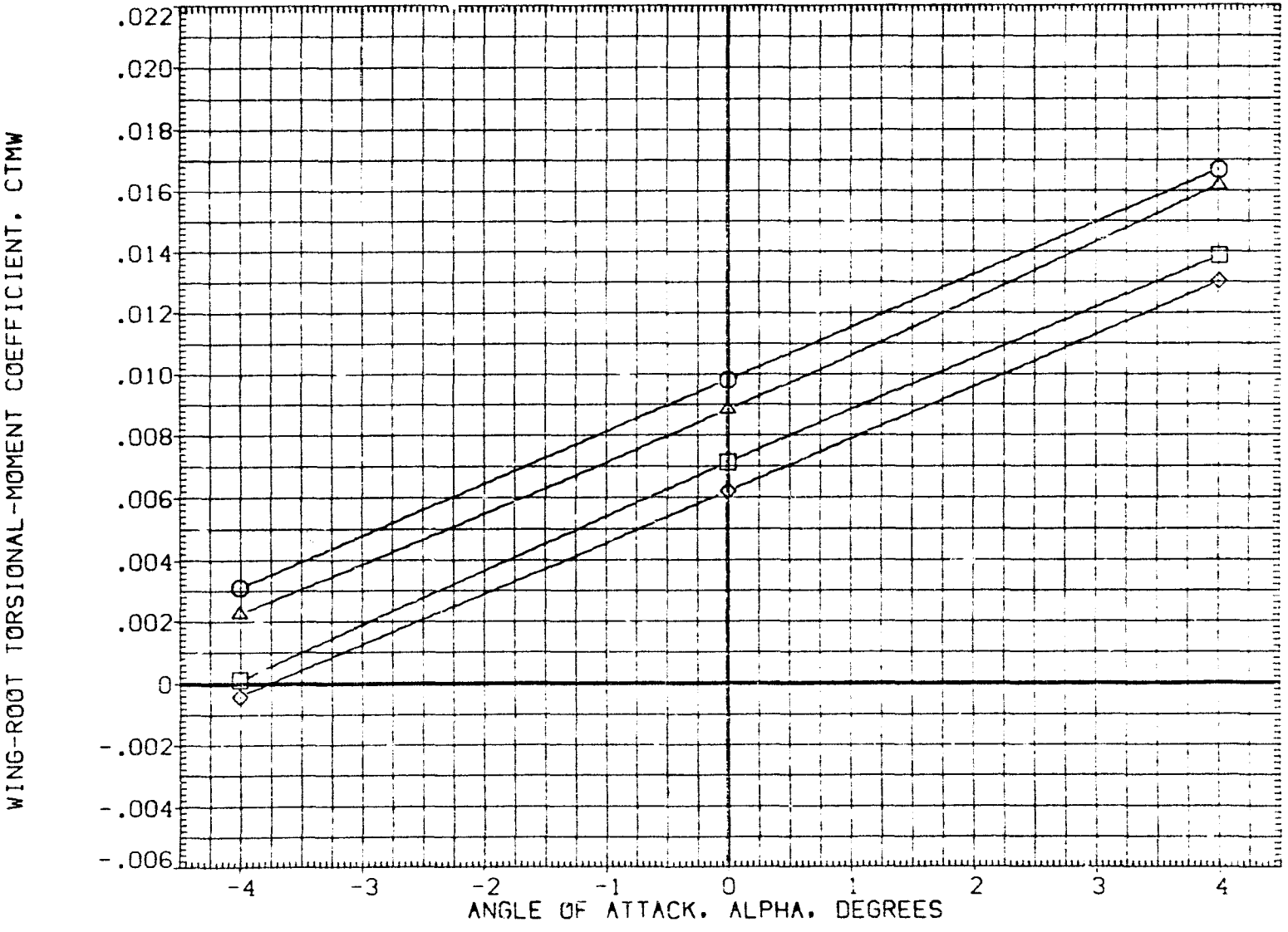


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X84) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4X53) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4X64) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
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| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

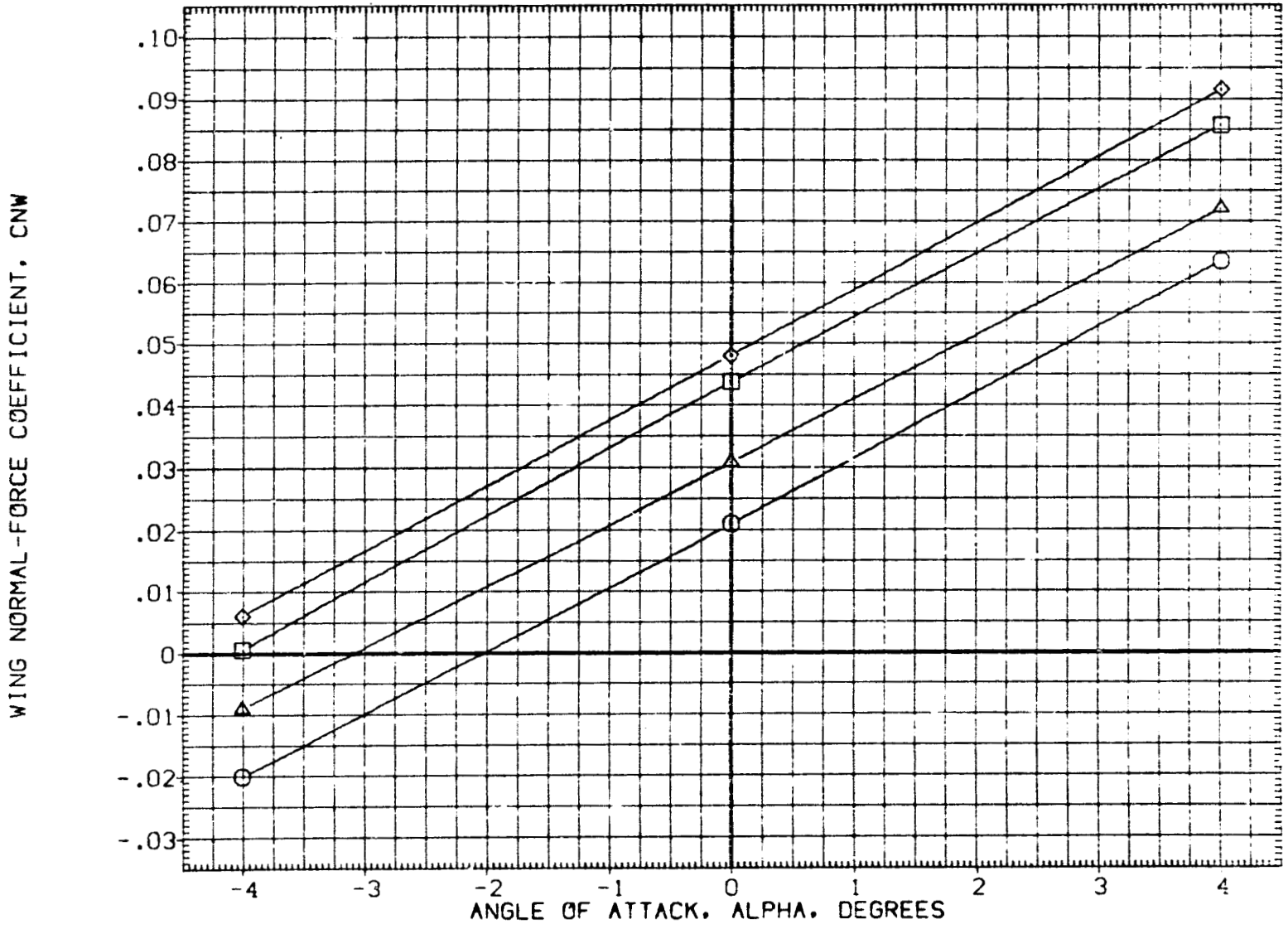


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X29) ○ | ARC 11-023 IAB0 0TS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4XA1) □ | ARC 11-023 IAB0 0TS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .900 | 4.250 |
| (RE4X91) ◇ | ARC 11-023 IAB0 0TS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4X75) △ | ARC 11-023 IAB0 0TS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

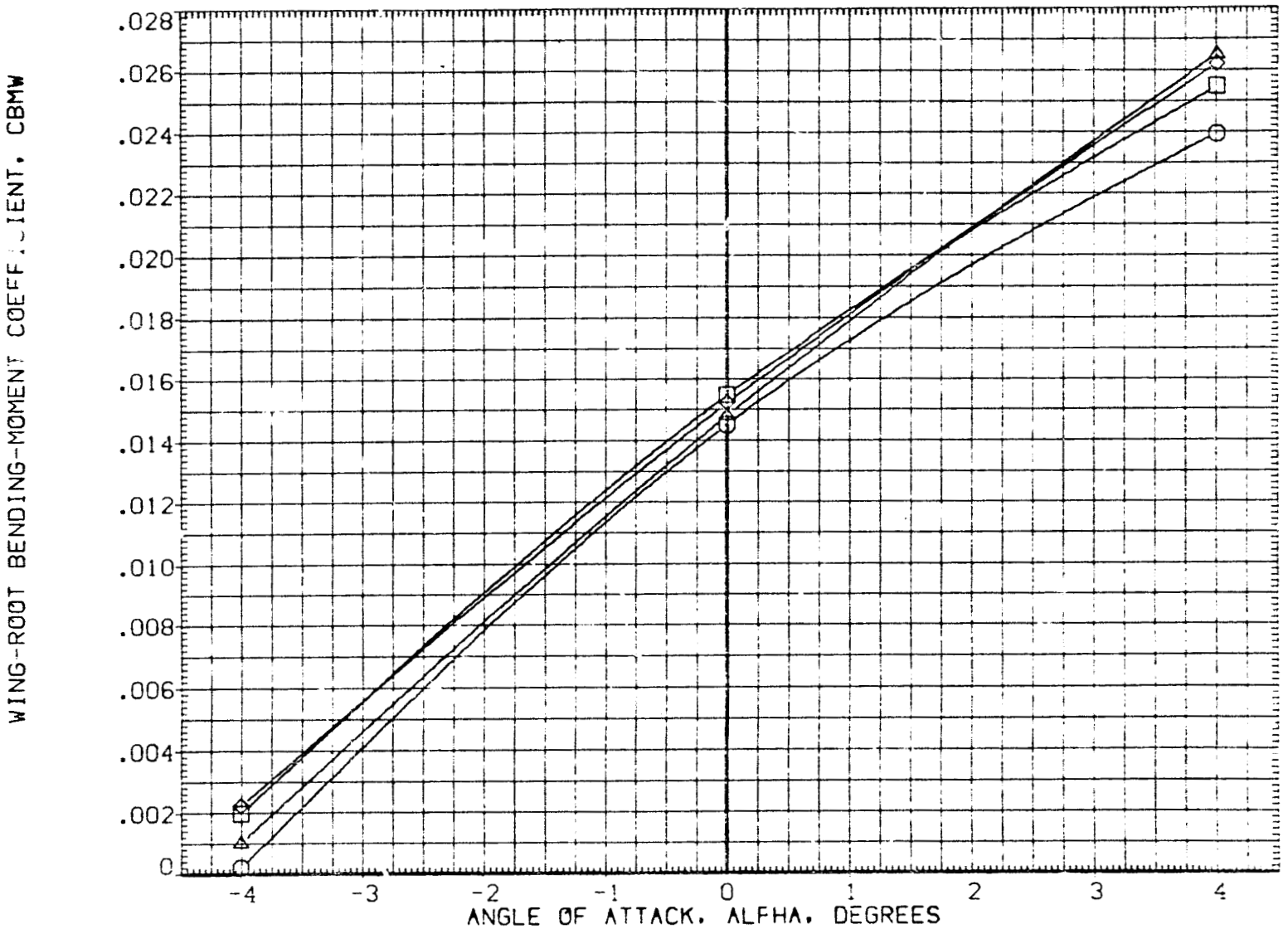


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4XA1) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .900 | 4.250 |
| (RE4X91) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4X75) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
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| BREF | 1290.3000 | IN. |
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| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

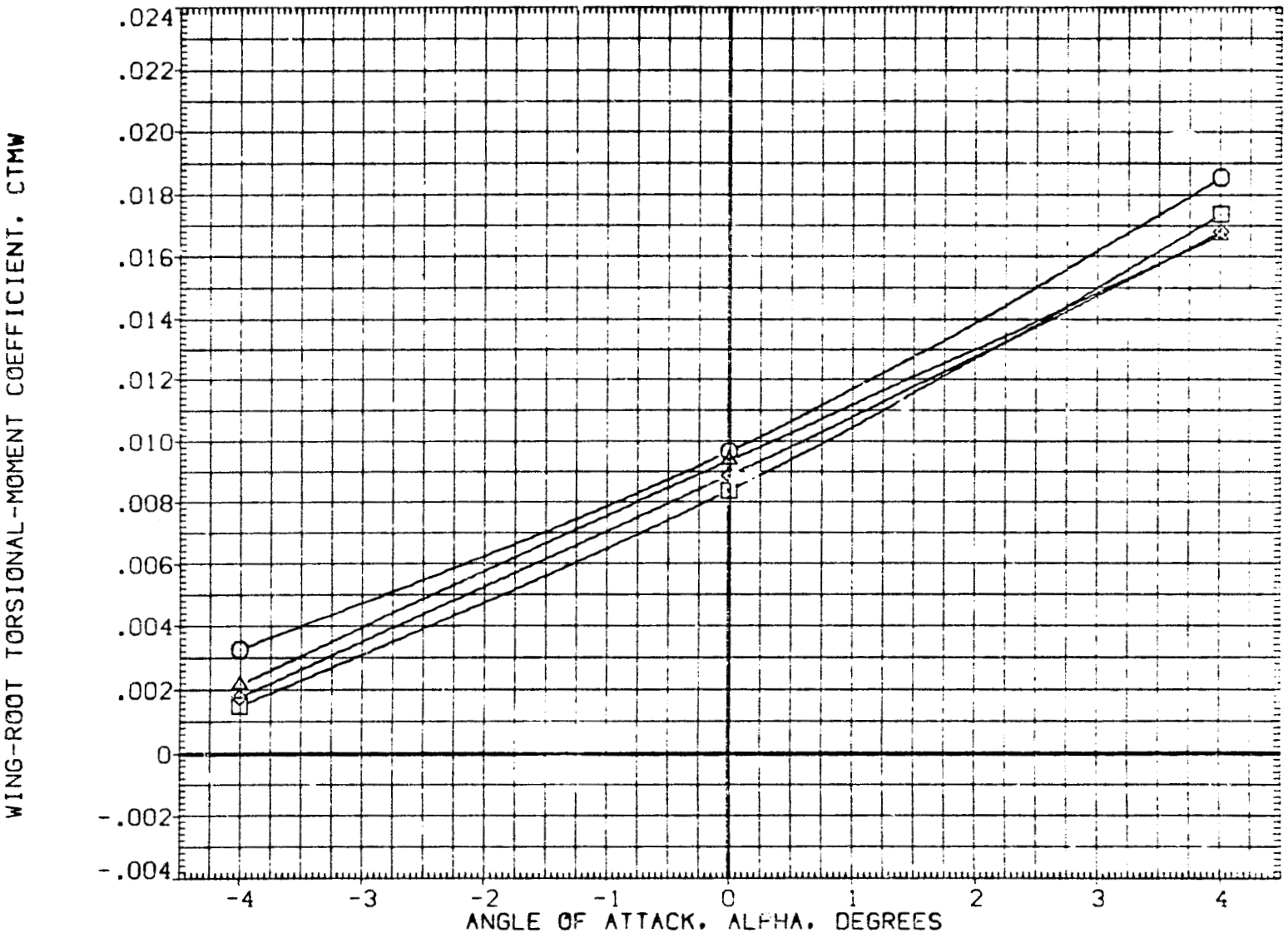


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4XA1) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .900 | 4.250 |
| (RE4X91) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4X75) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

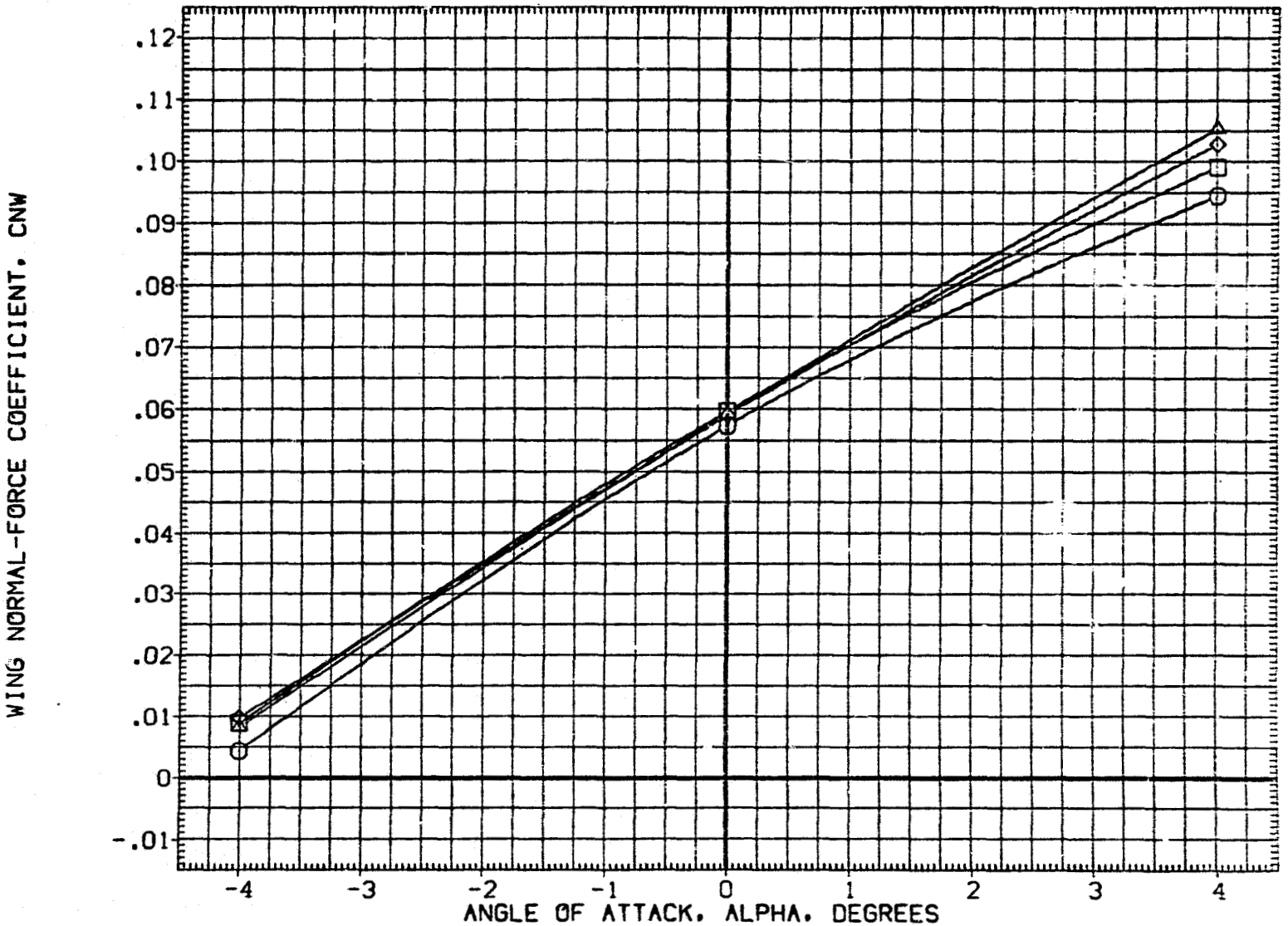


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X85) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4X54) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X65) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
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| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

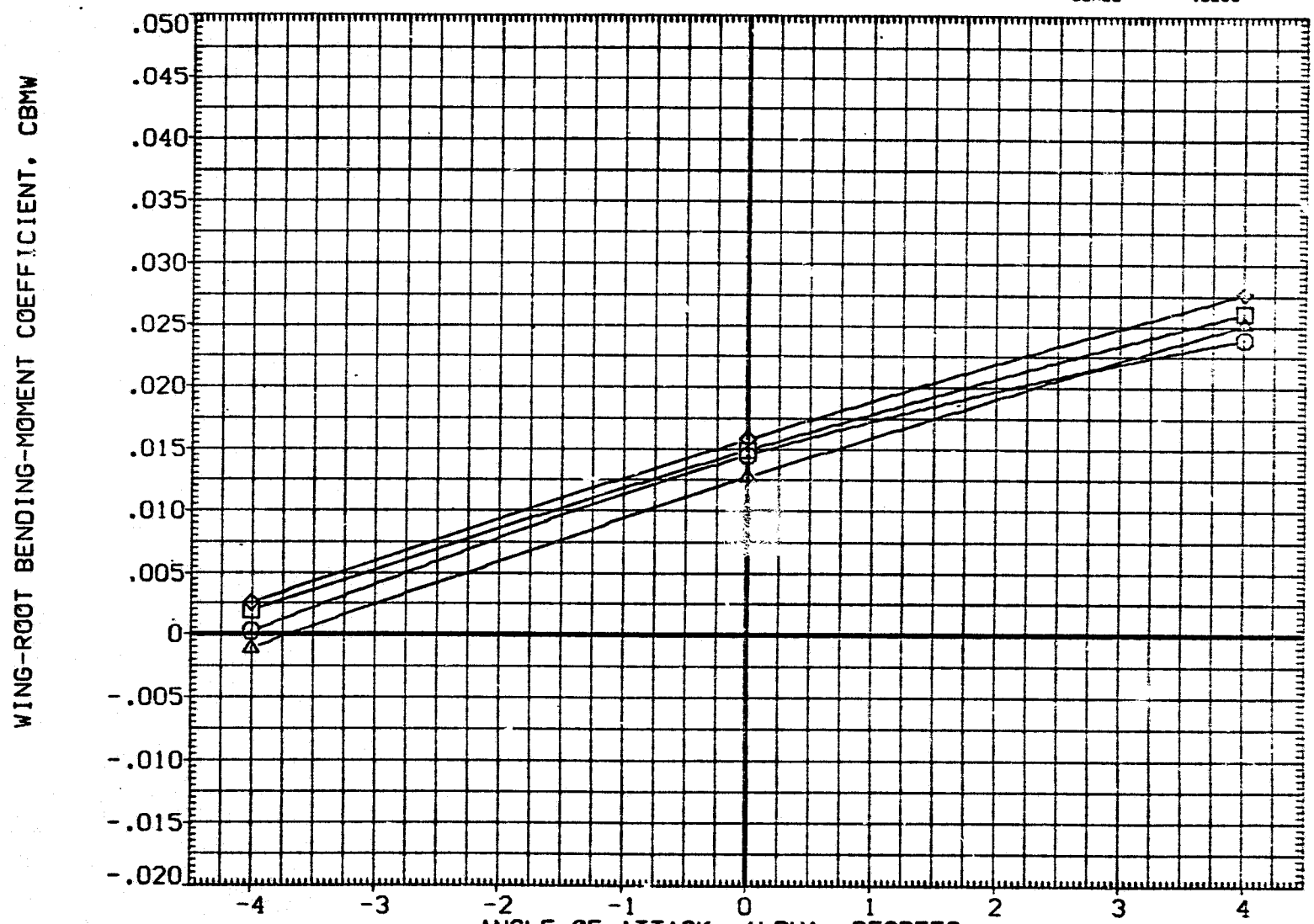


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X85) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4X54) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X65) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
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| LREF | 1290.3000 | IN. |
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| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

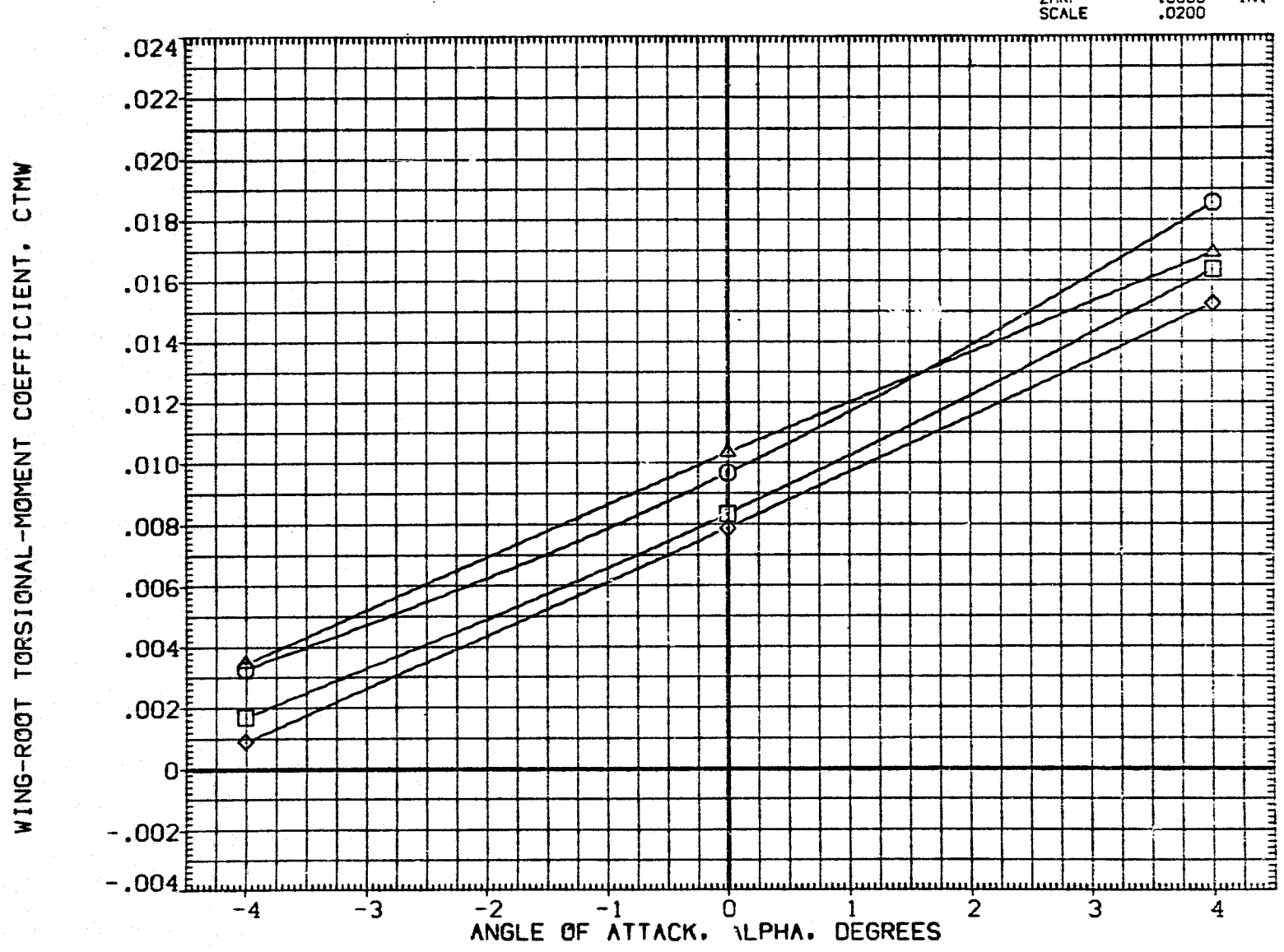


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X85) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4X54) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X65) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
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| BREF | 1290.3000 | IN. |
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| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

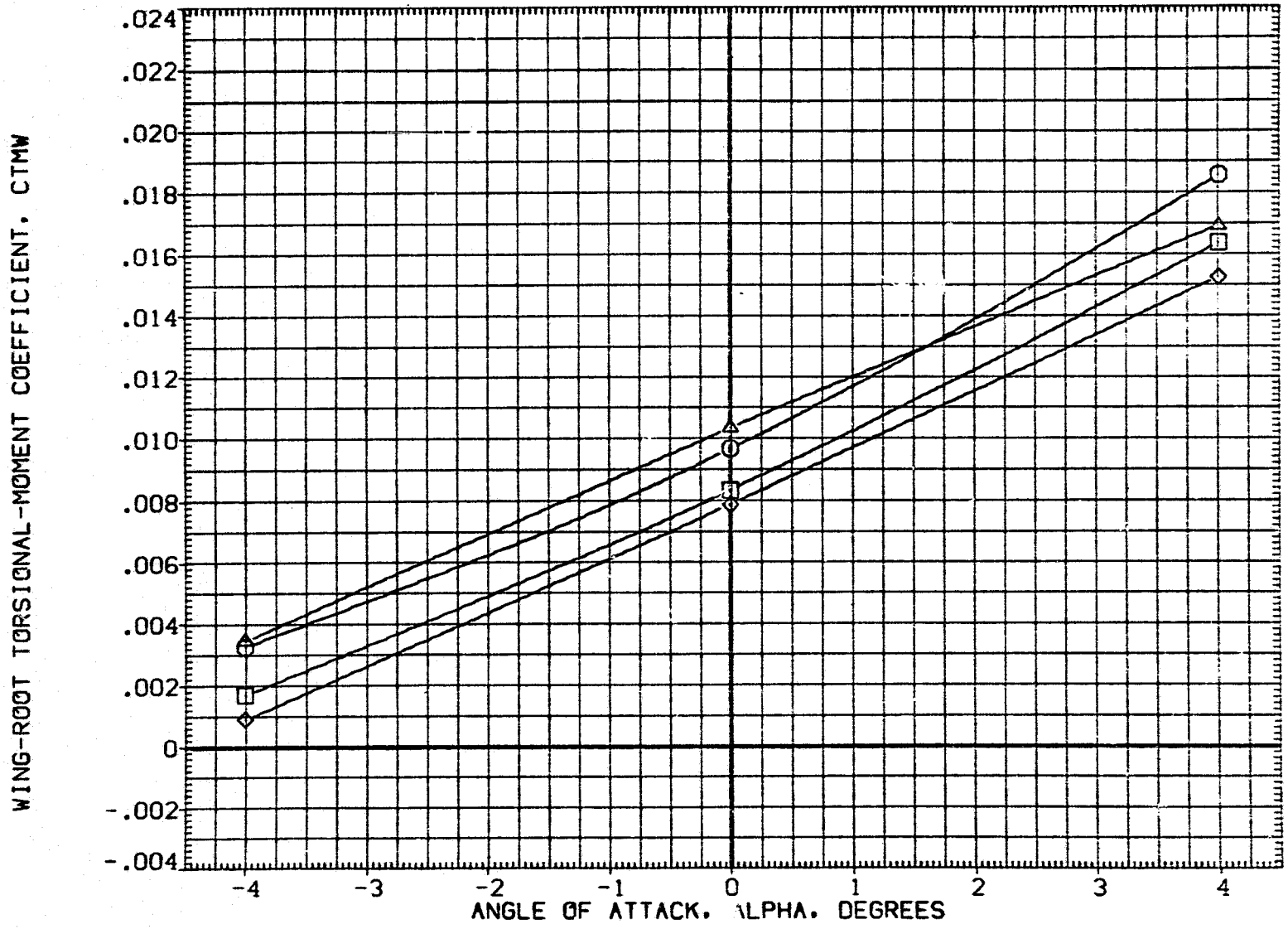



FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X85) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |
| (RE4X54) | ⋈ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X65) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

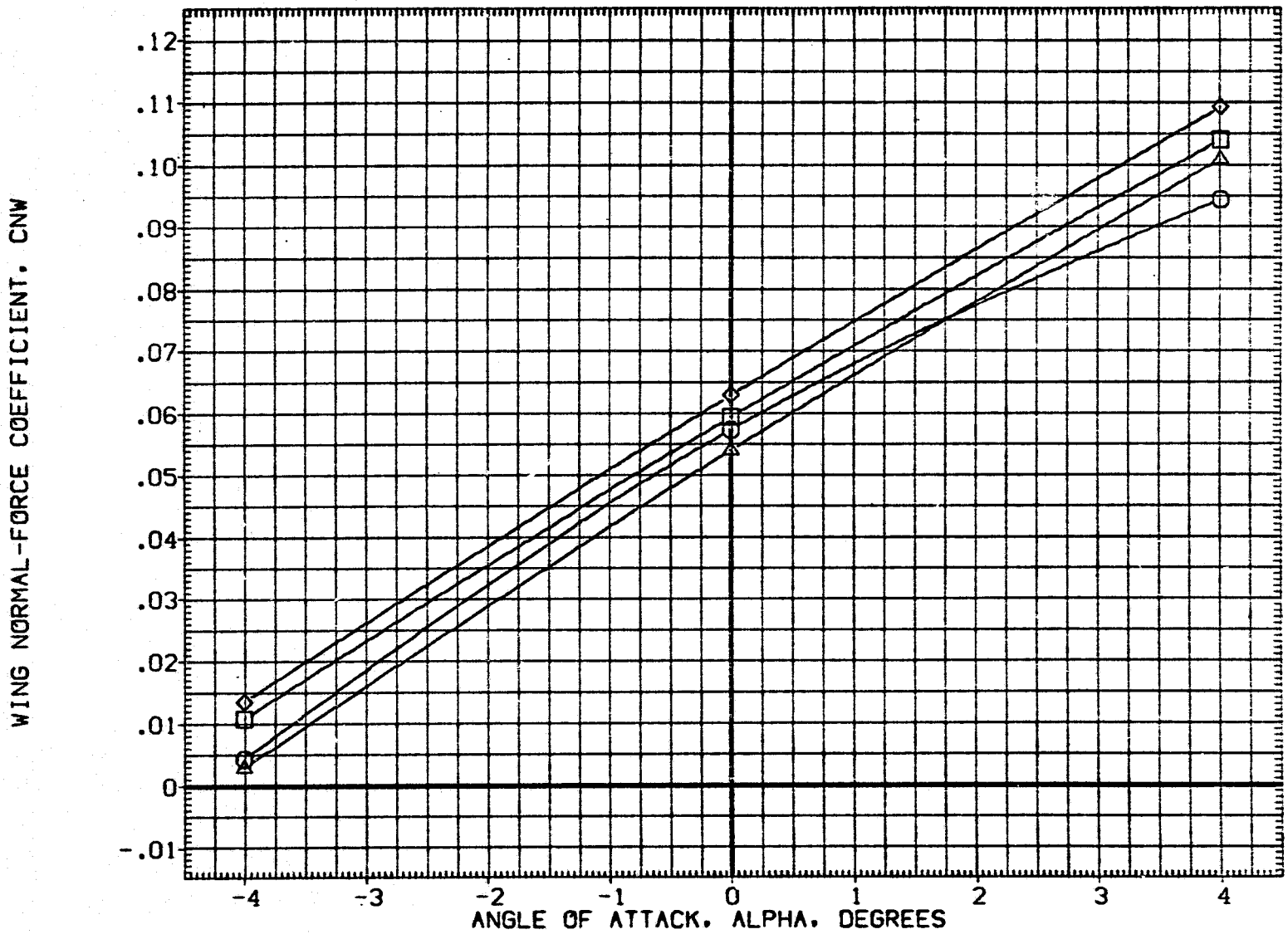



FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XA2) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4X92) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4X76) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

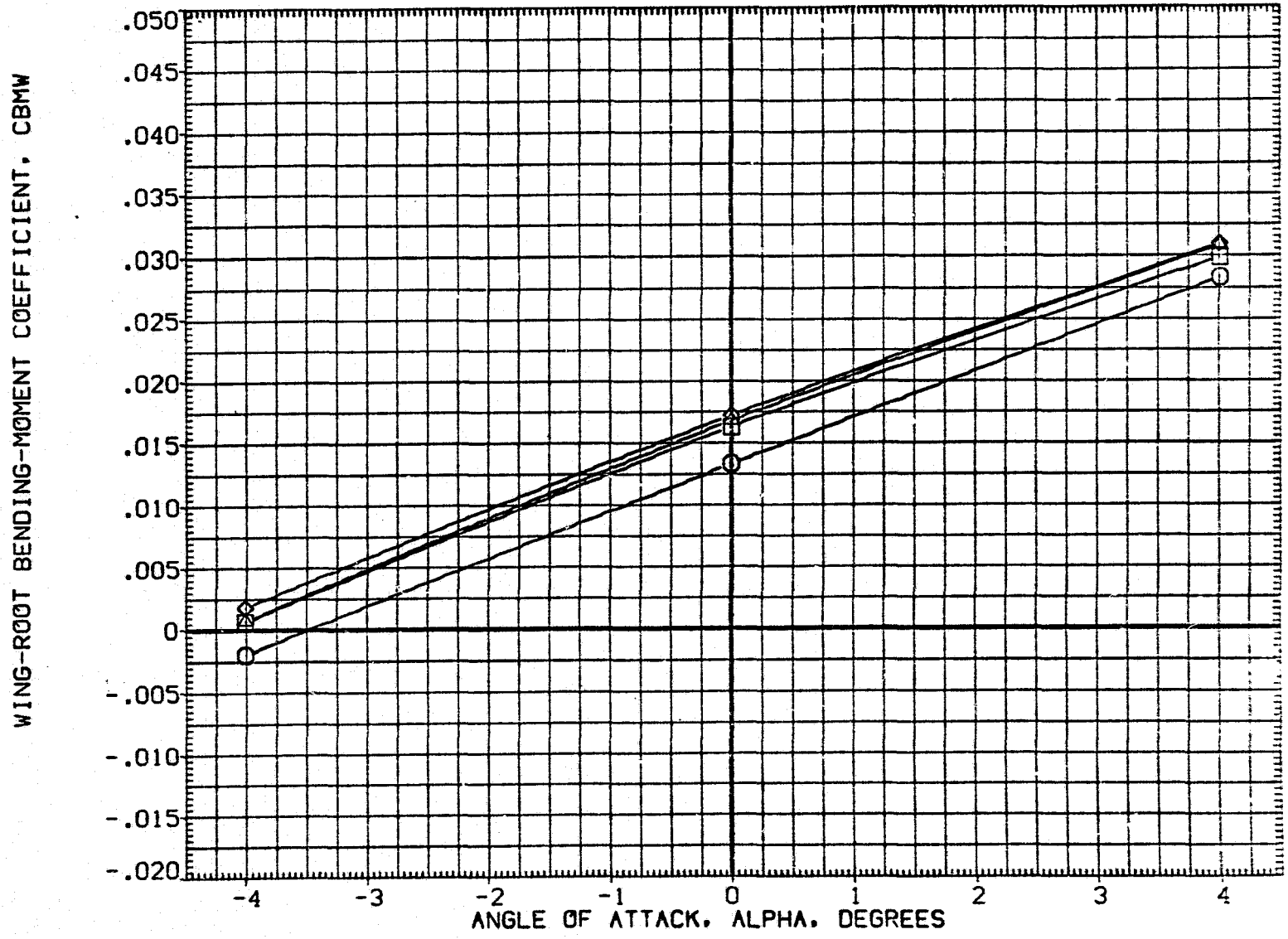



FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XA2) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4X92) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4X76) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

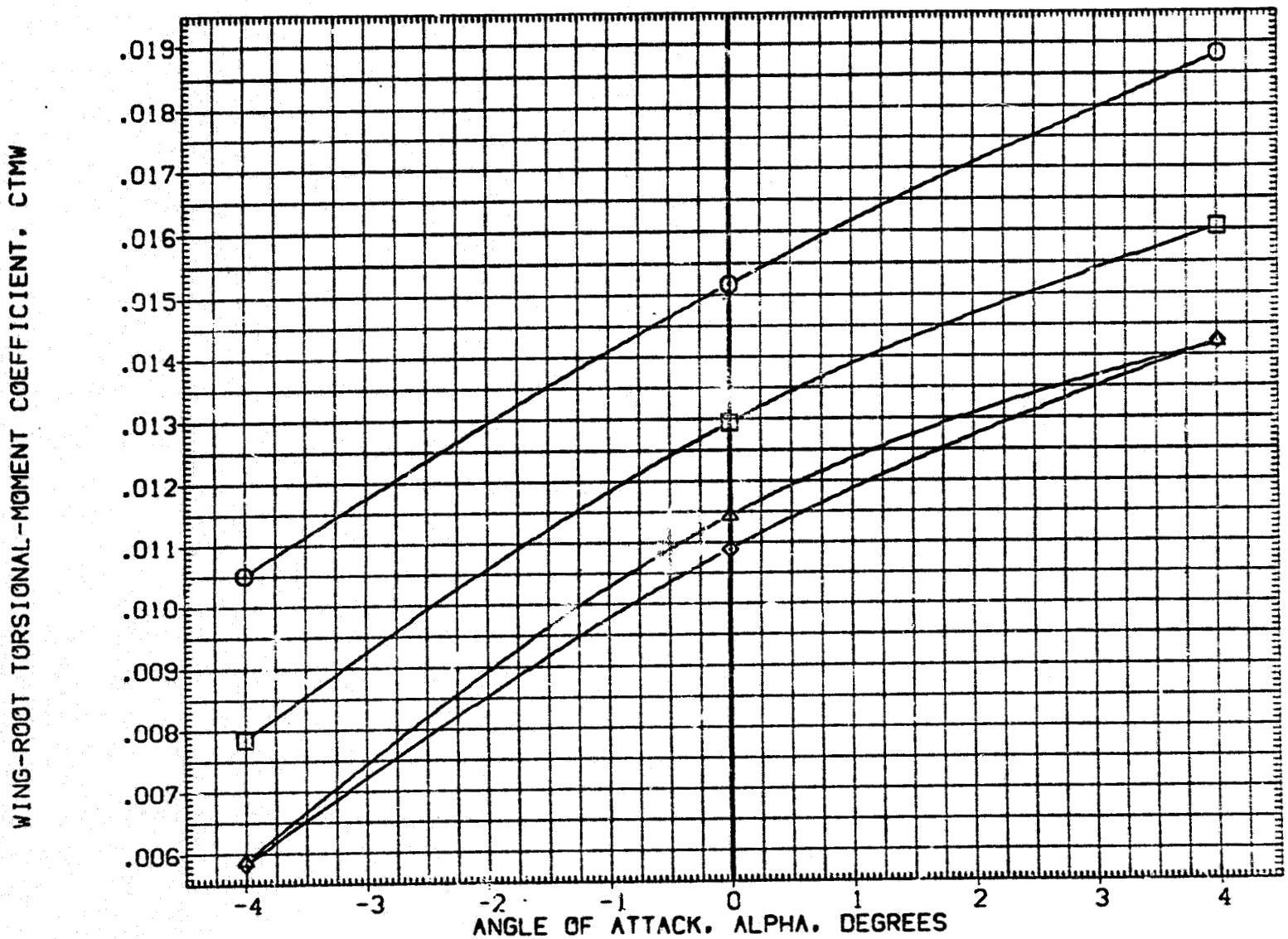



FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XA2) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4X92) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4X76) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

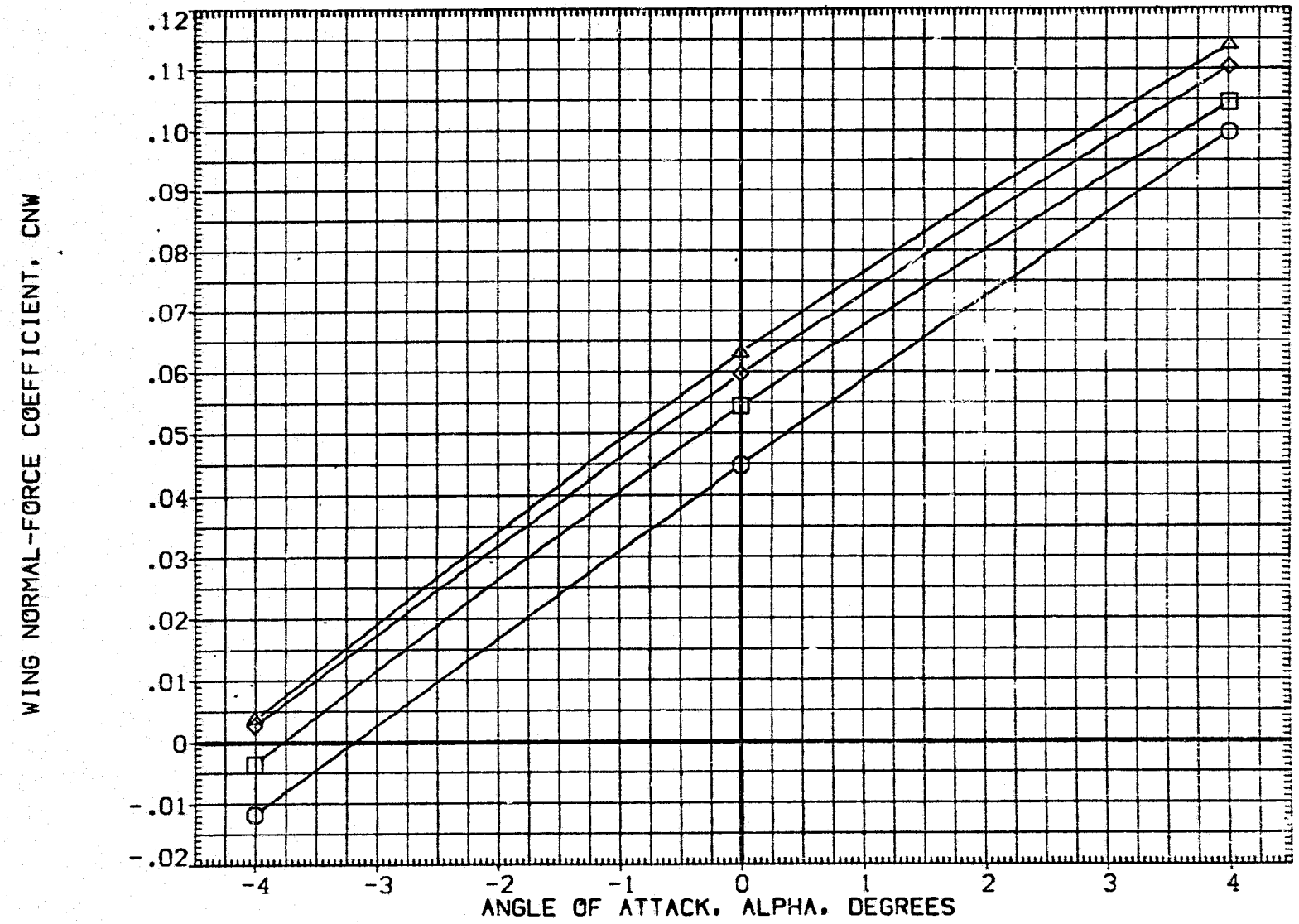



FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X86) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4X55) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4X66) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

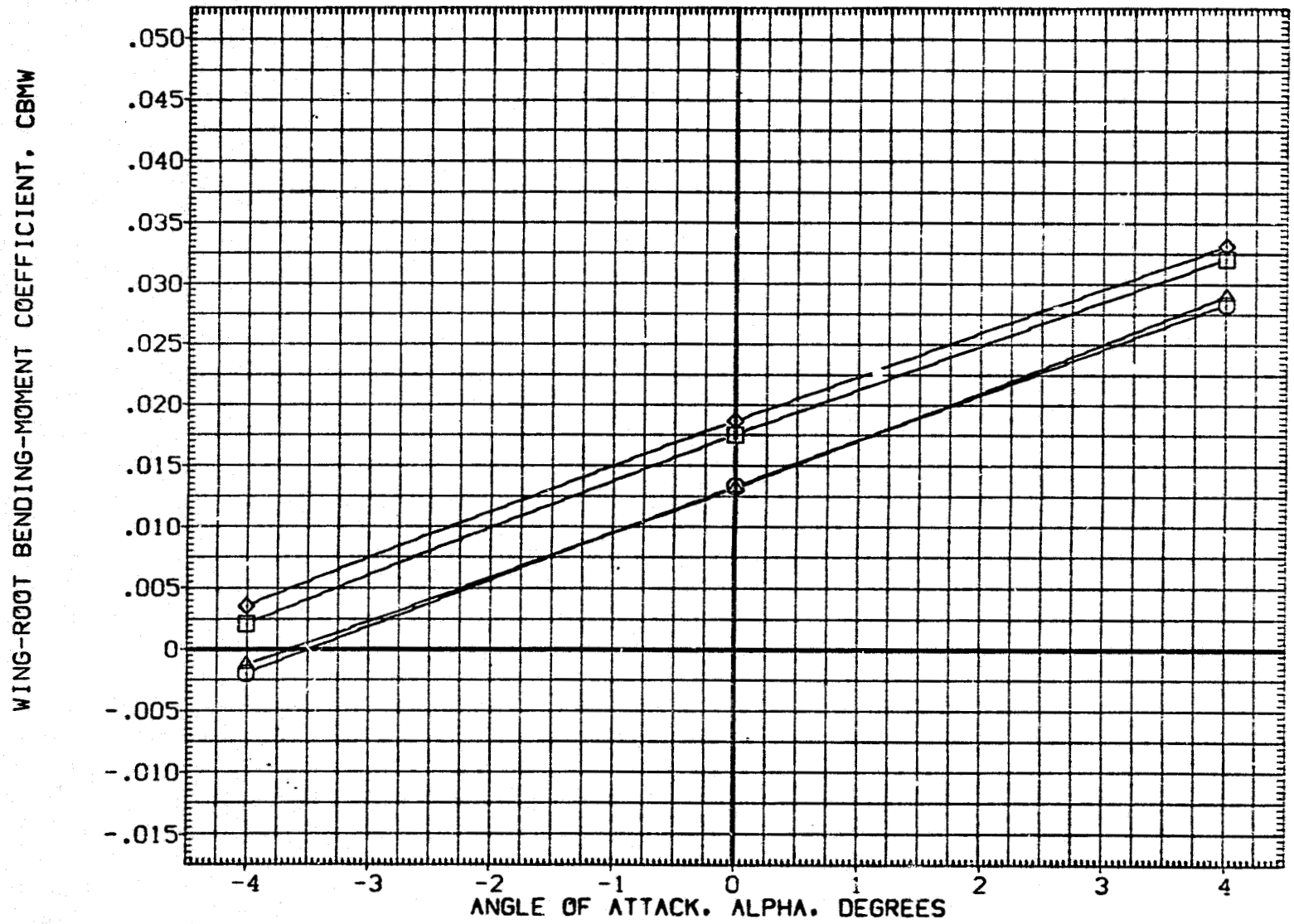



FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X86) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4X55) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4X66) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

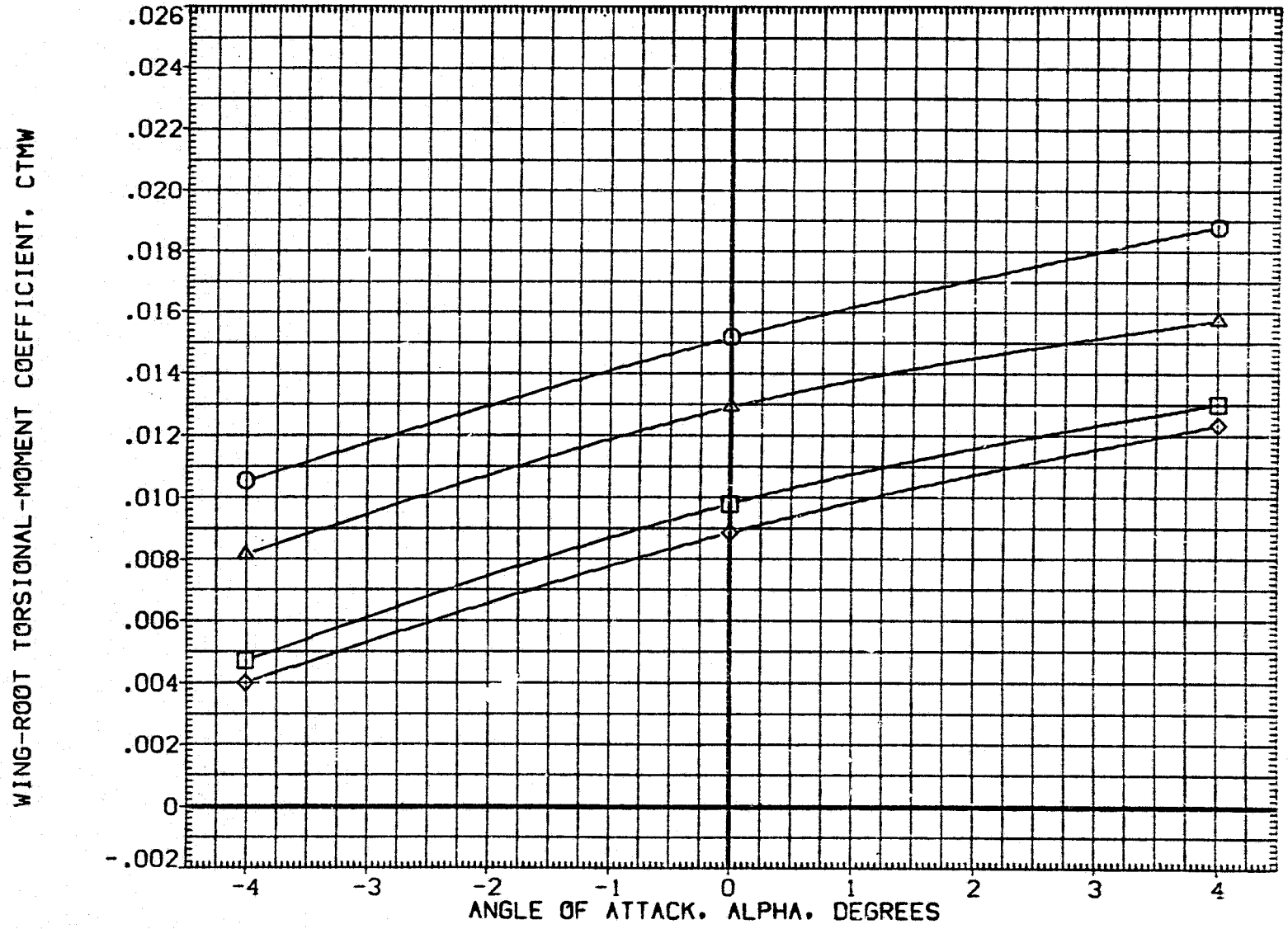



FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X86) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4X55) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4X66) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

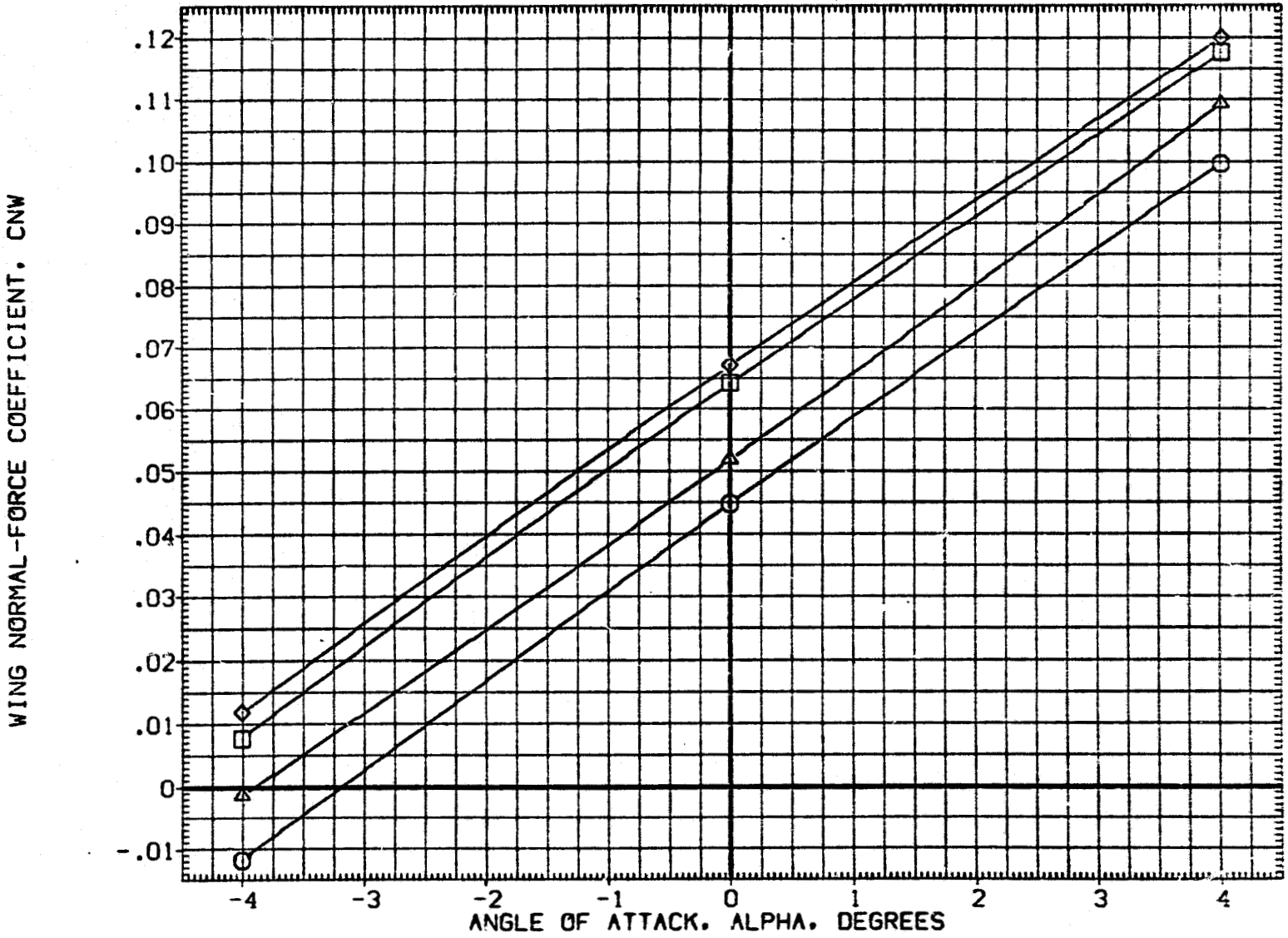



FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XA3) | □ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4X93) | ◇ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4X7 | △ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

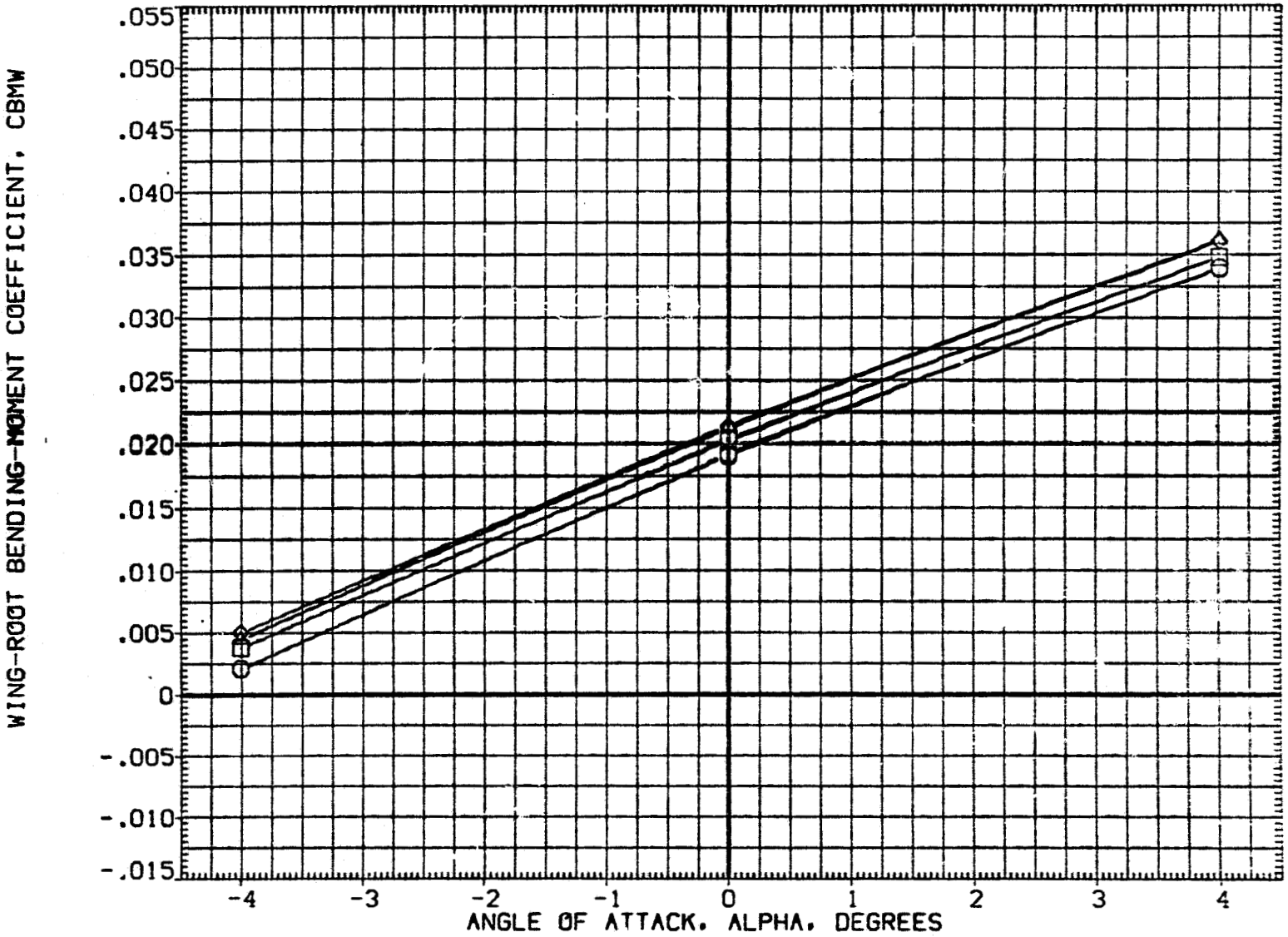



FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XA3) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4X93) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4X77) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

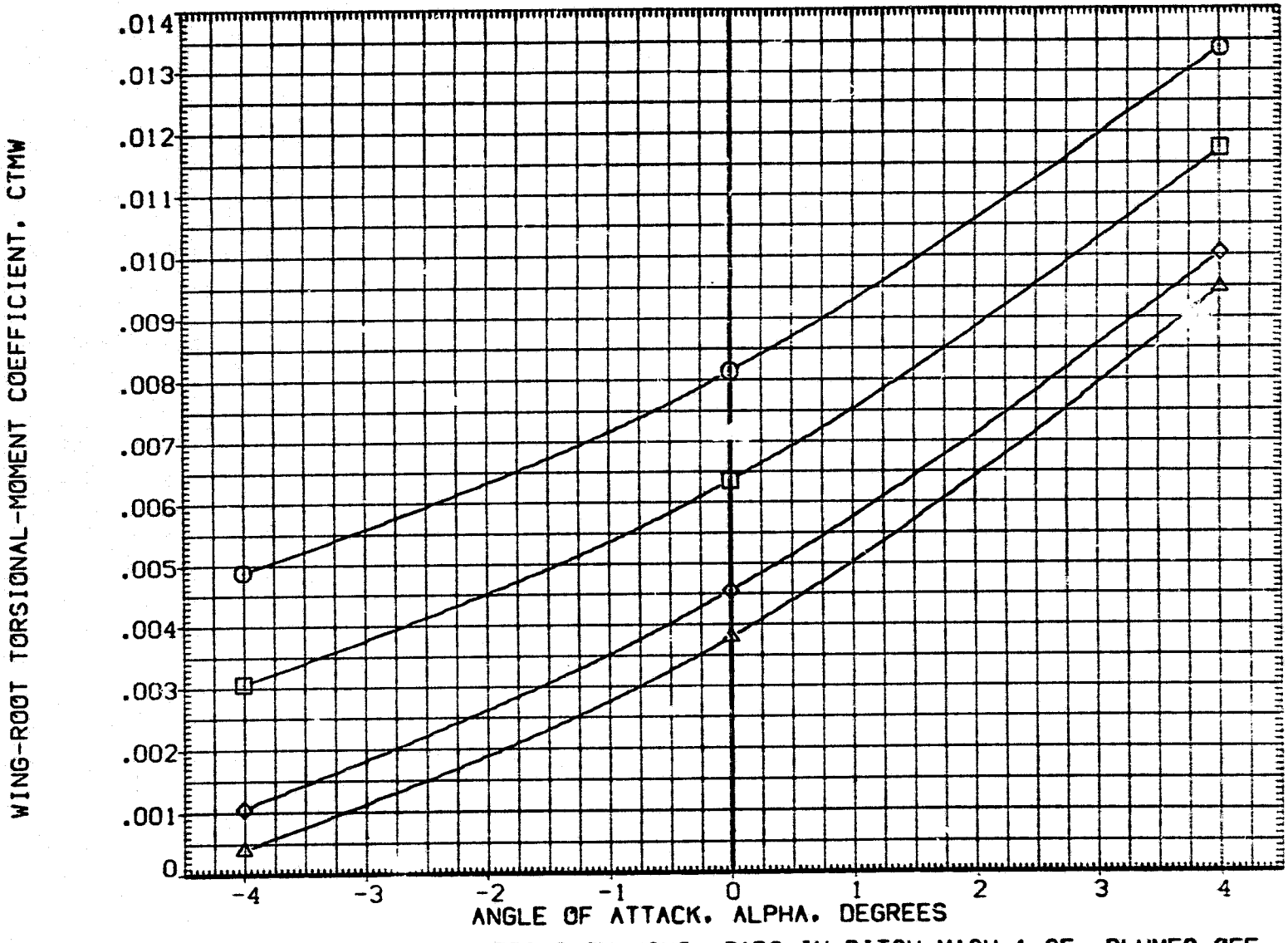



FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XA3) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4X93) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4X77) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

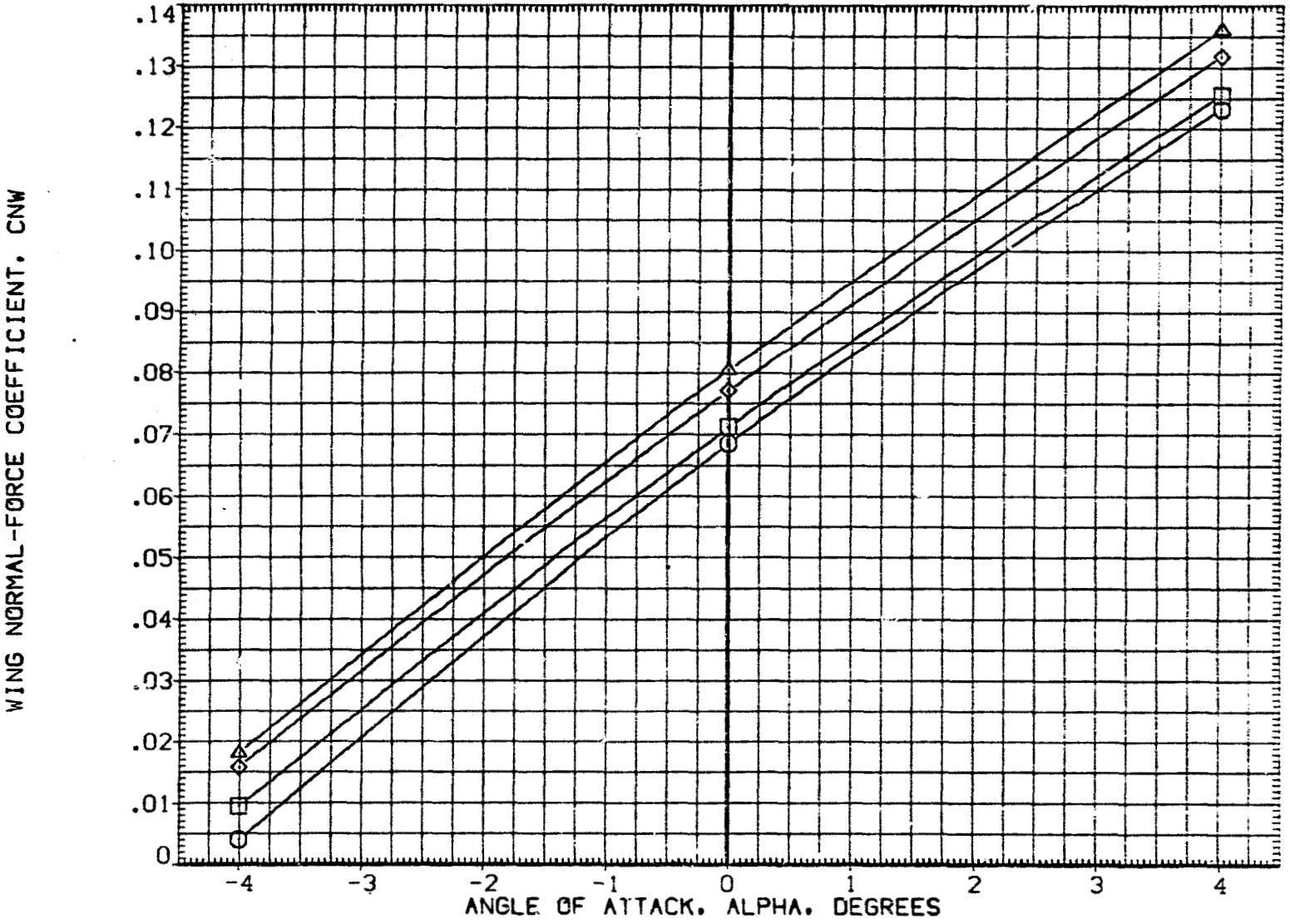



FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X31) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X56) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

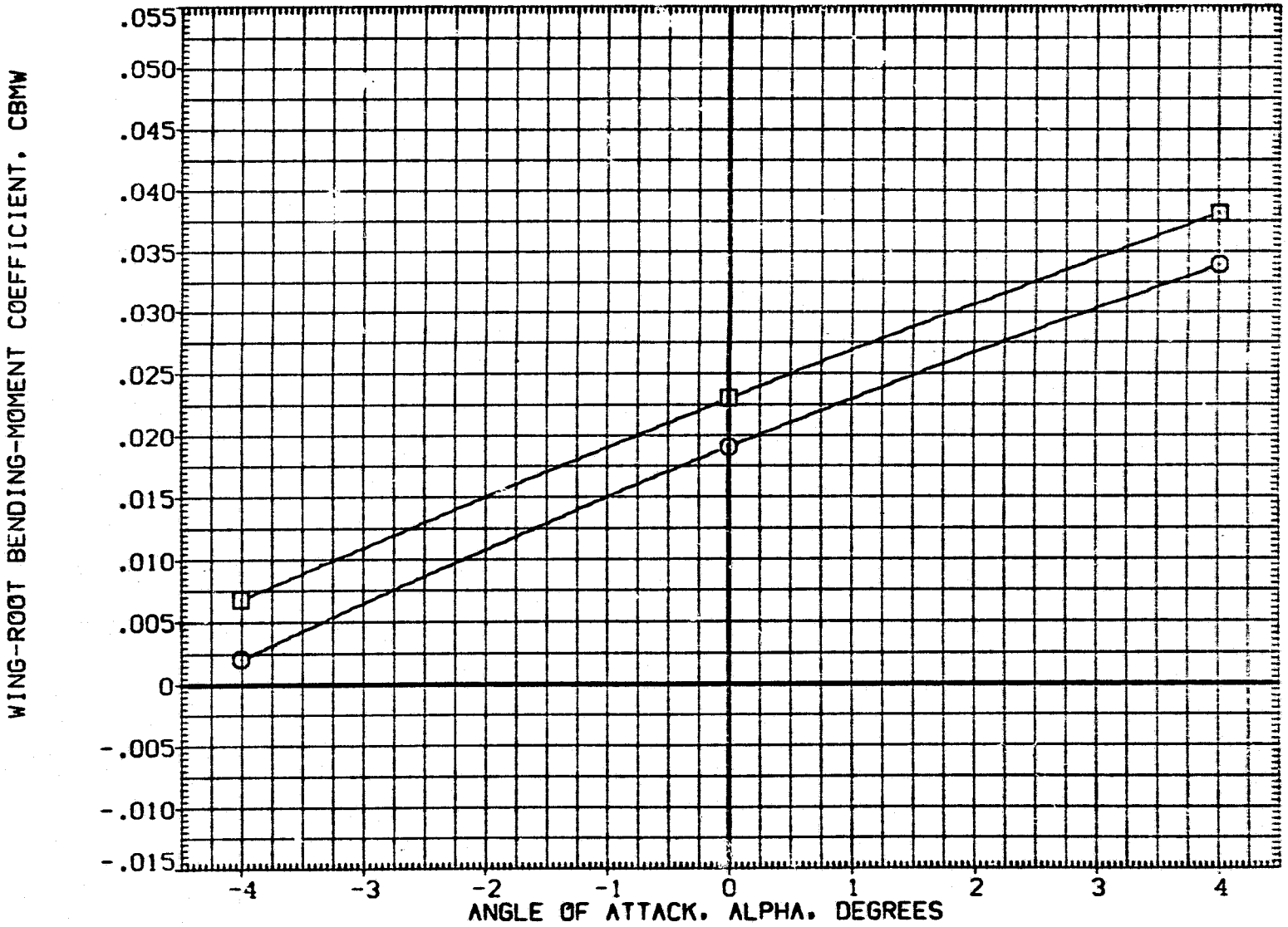



FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X31) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X56) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

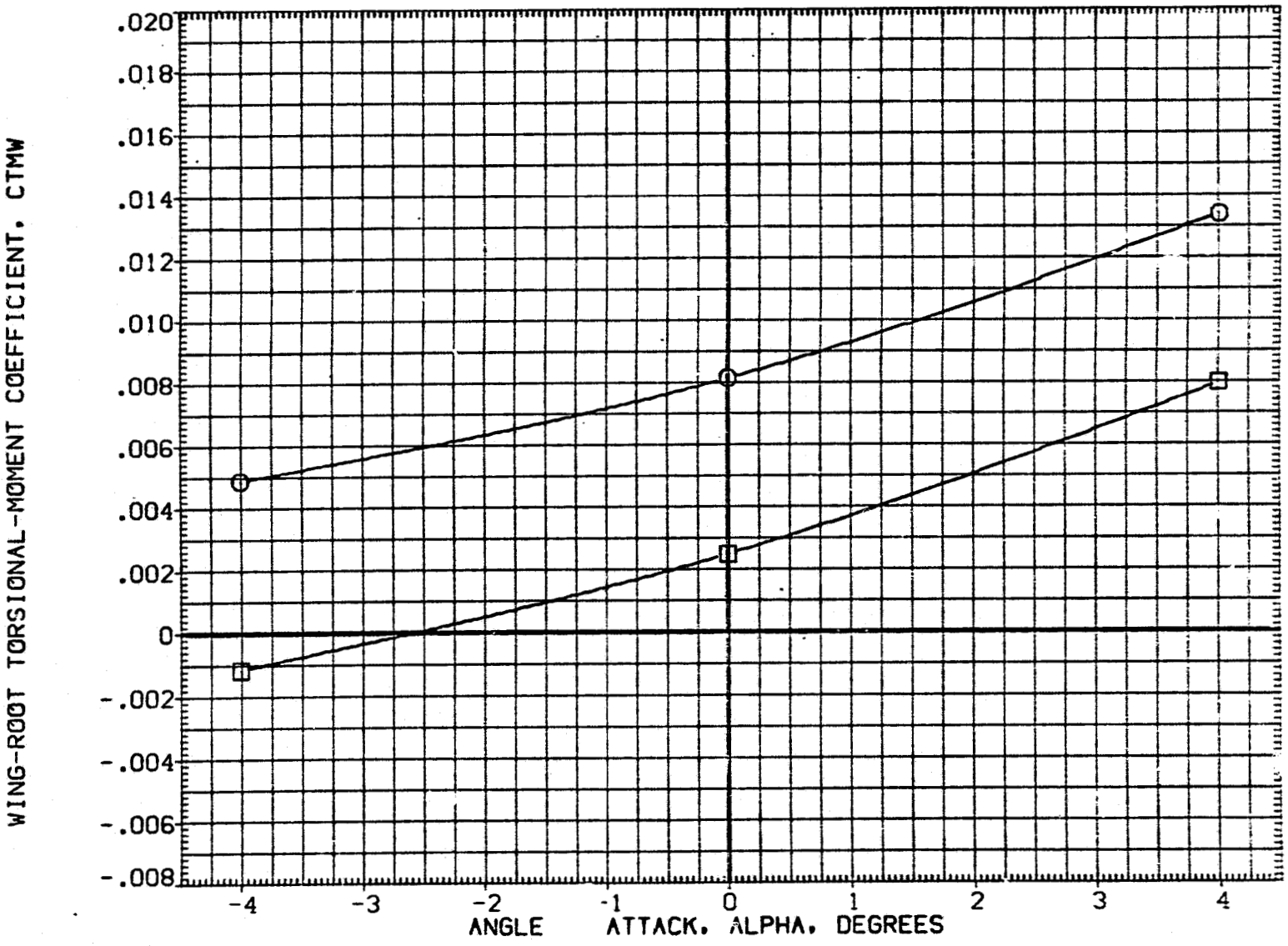



FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X31) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X56) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

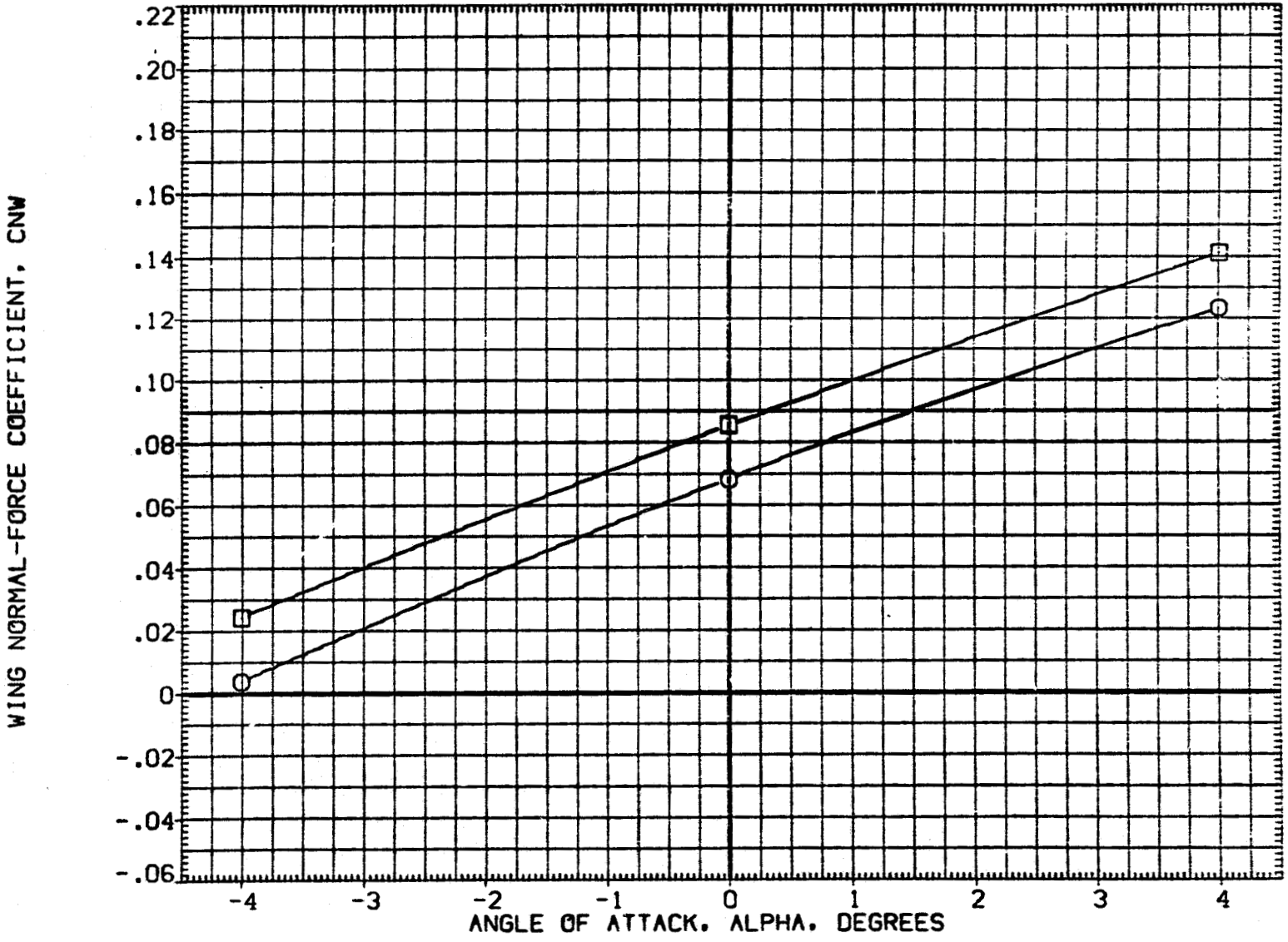



FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XA4) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4X94) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4X78) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

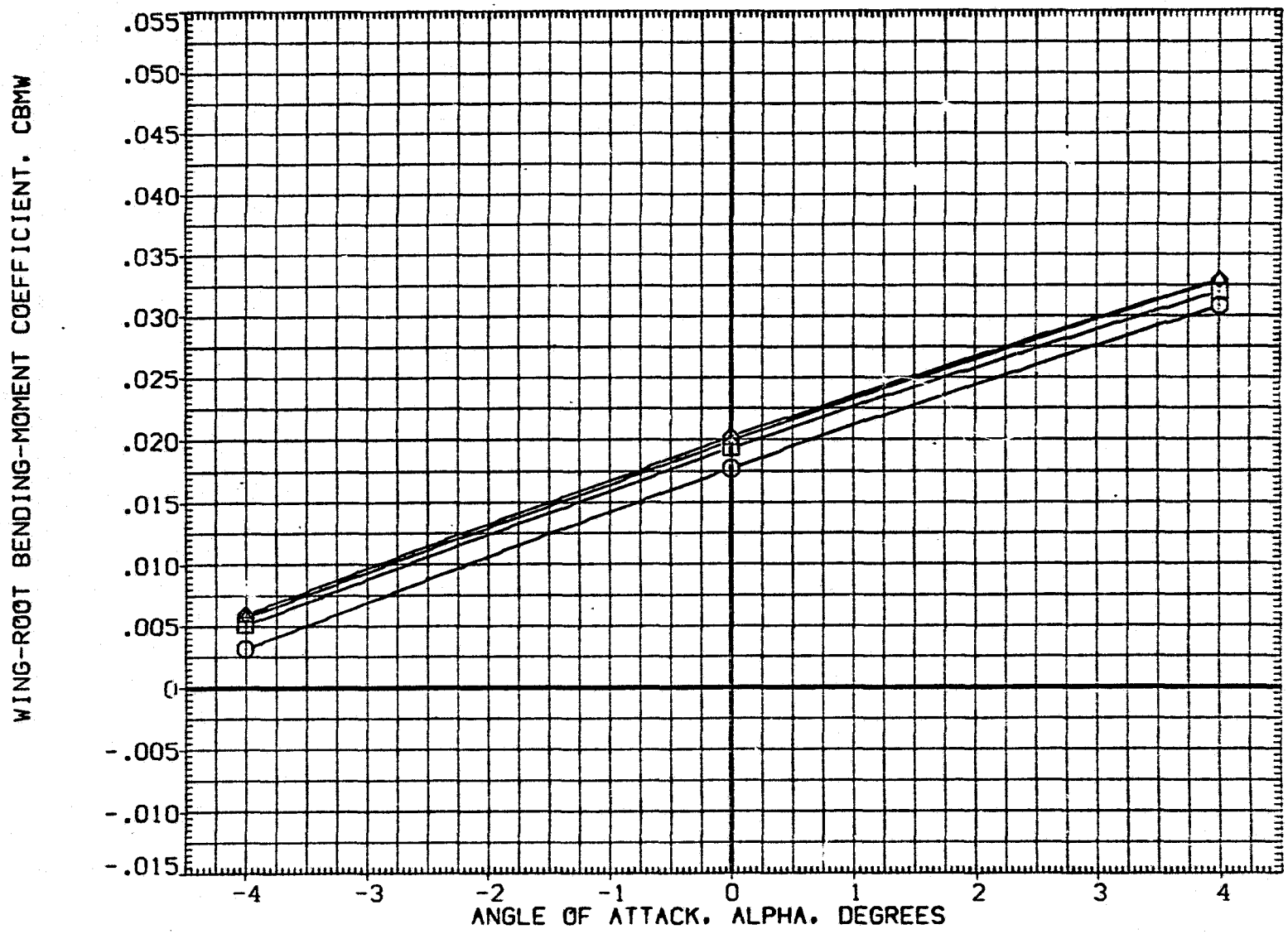



FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X32) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XA4) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4X94) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4X78) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

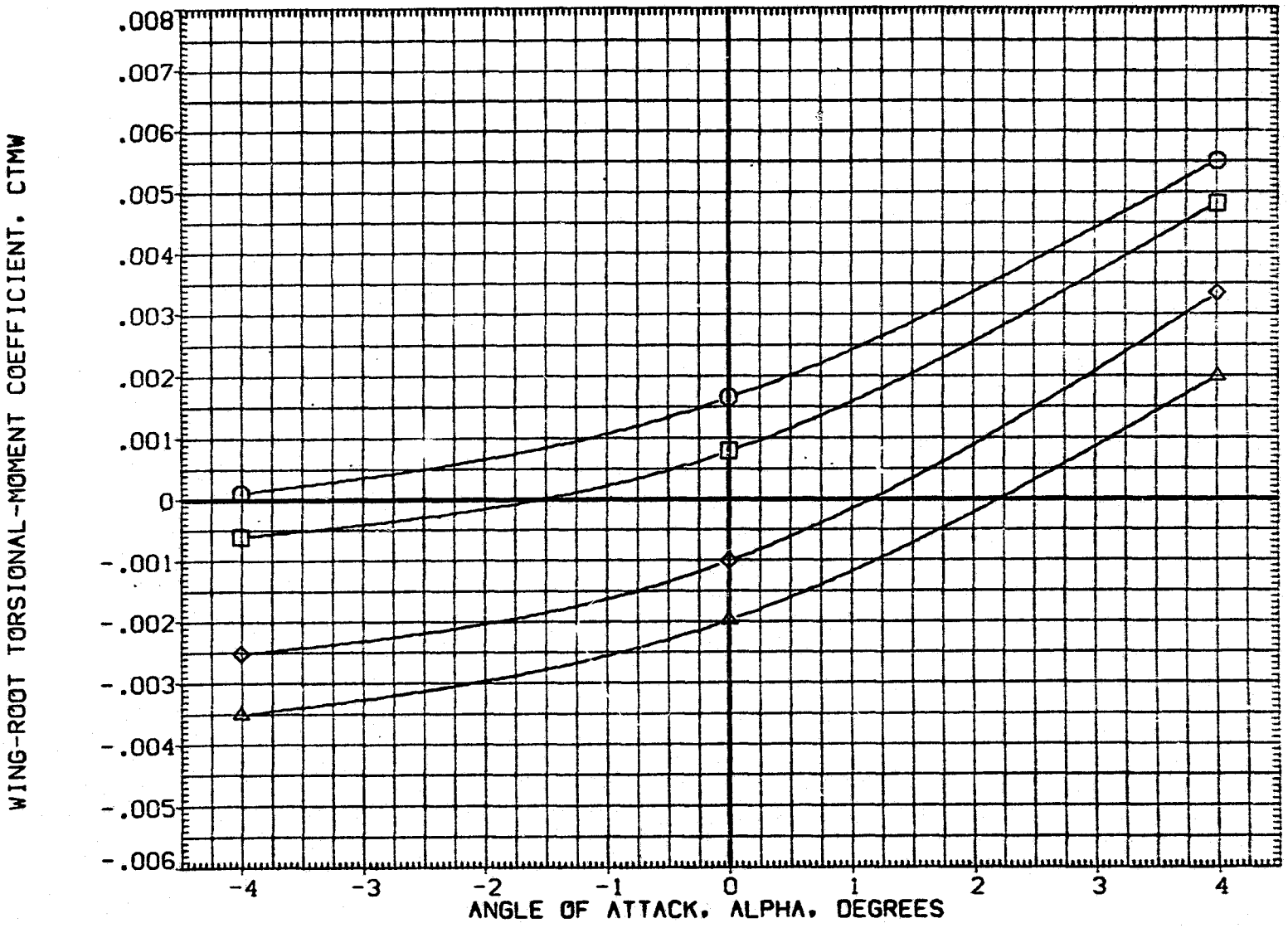



FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XA4) | □ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4X94) | ◇ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4X78) | △ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

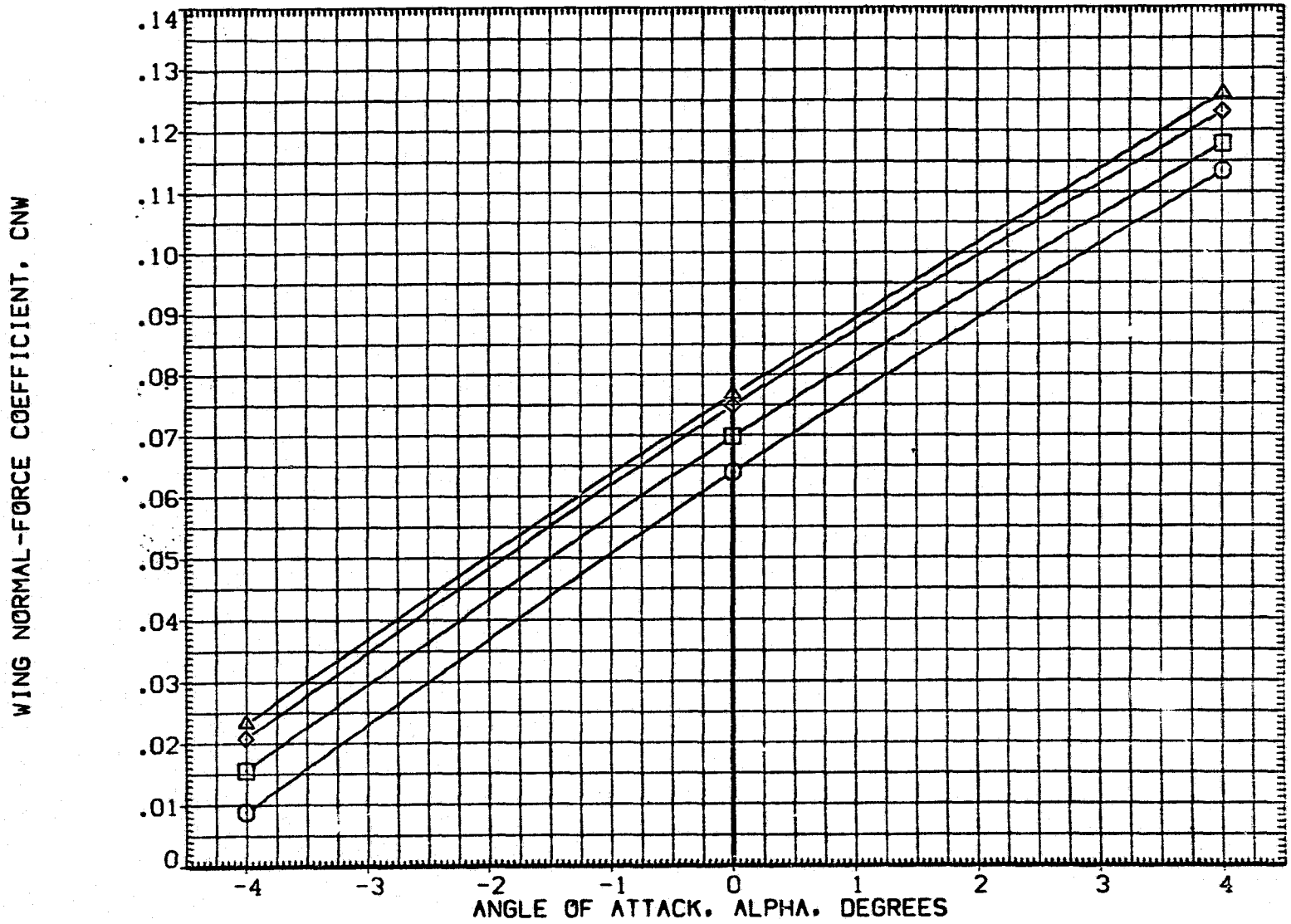



FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X57) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.400 | 4.250 |
| (RE4X68) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

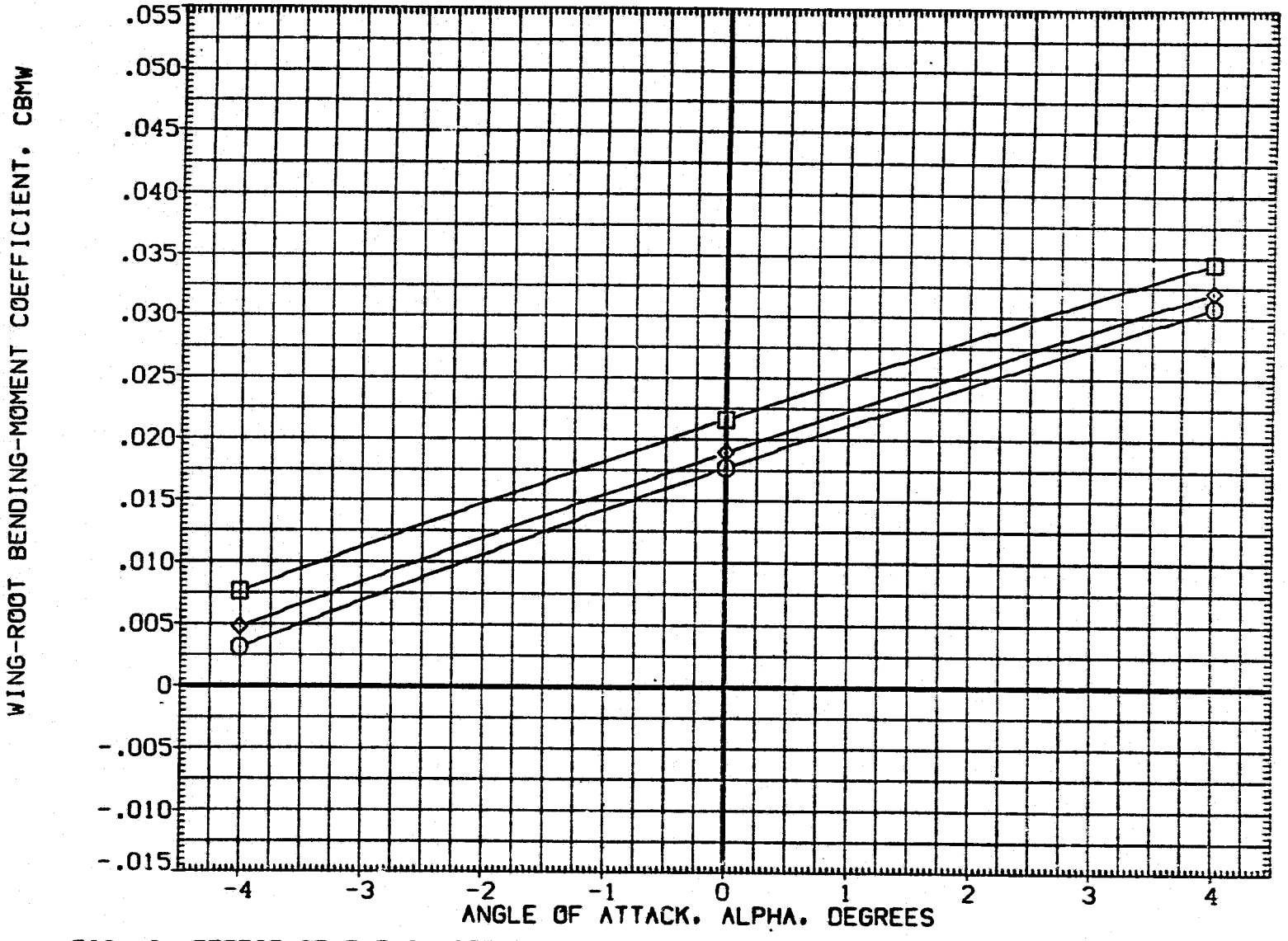



FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X32) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X57) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.400 | 4.250 |
| (RE4X68) ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN |
| XMRP | .0000 | IN |
| YMRP | .0000 | IN |
| ZMRP | .0000 | IN |
| SCALE | .0200 | |

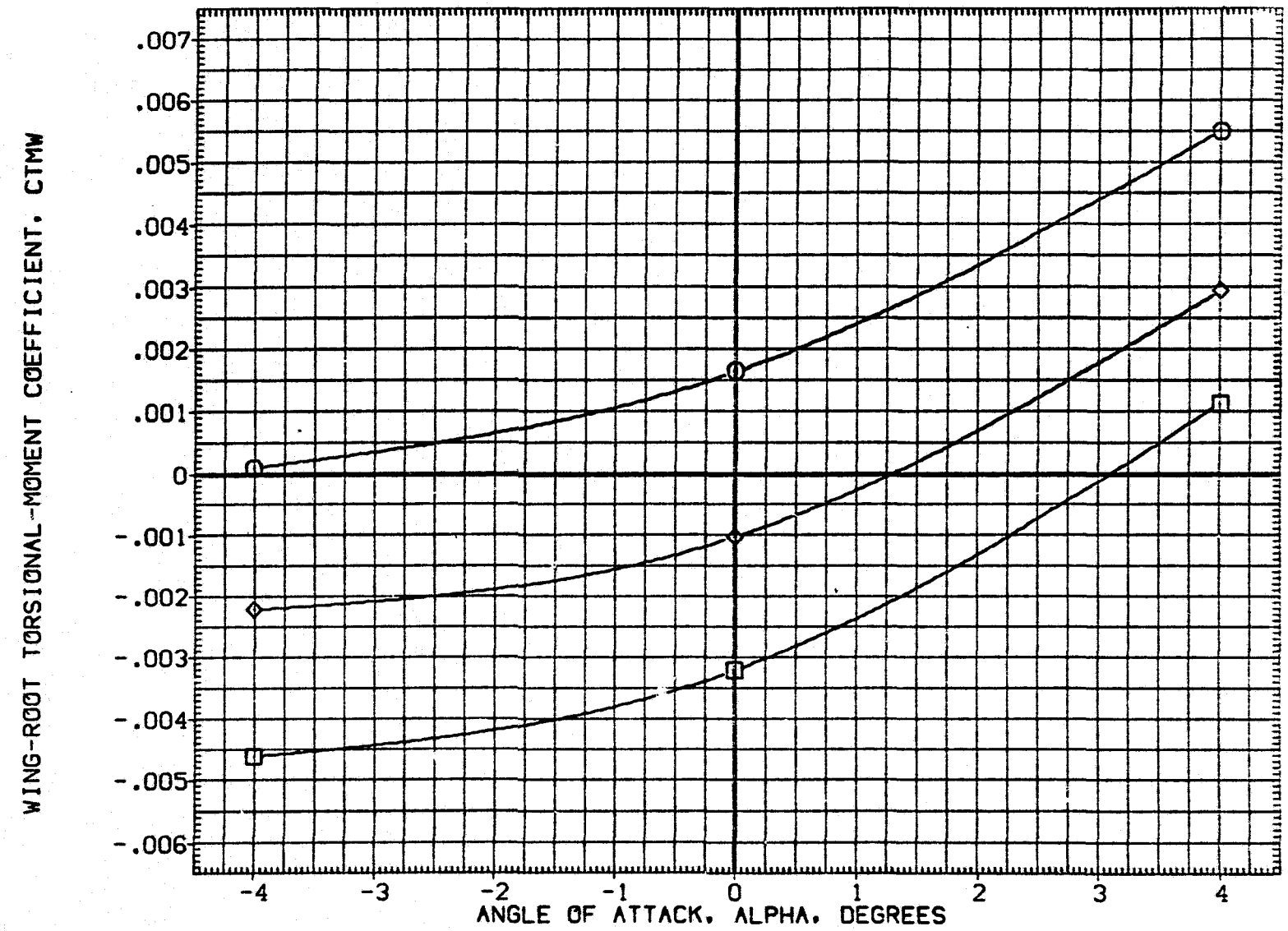



FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X32) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X57) ⊏□ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.400 | 4.250 |
| (RE4X68) ◇ | ARC 11-023 IA8C OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

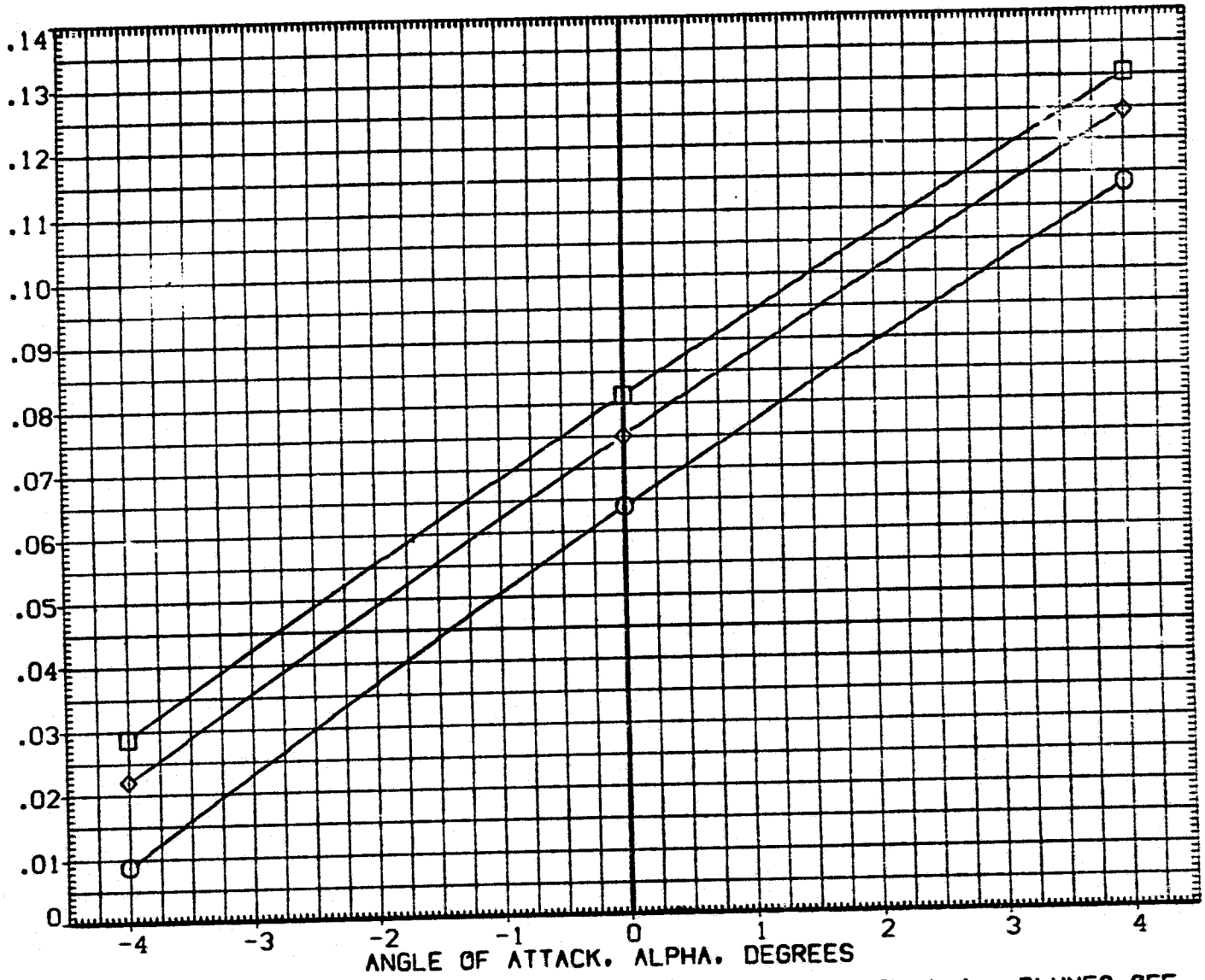



FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4XA0) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .600 | 3.400 |
| (RE4X90) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4X74) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

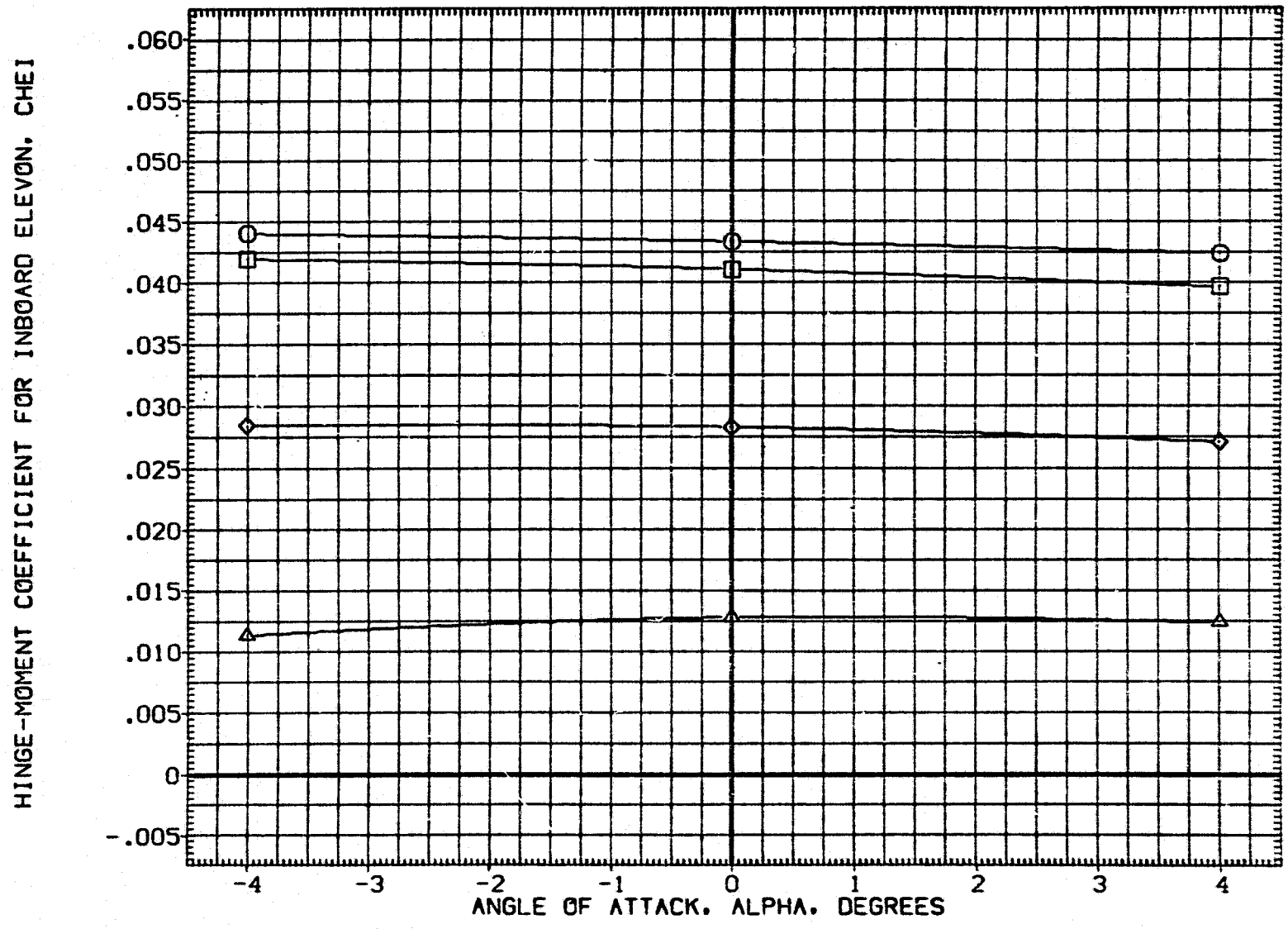



FIG. 9 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.6 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4XA0) | □ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .600 | 3.400 |
| (RE4X90) | ◇ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4X74) | △ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

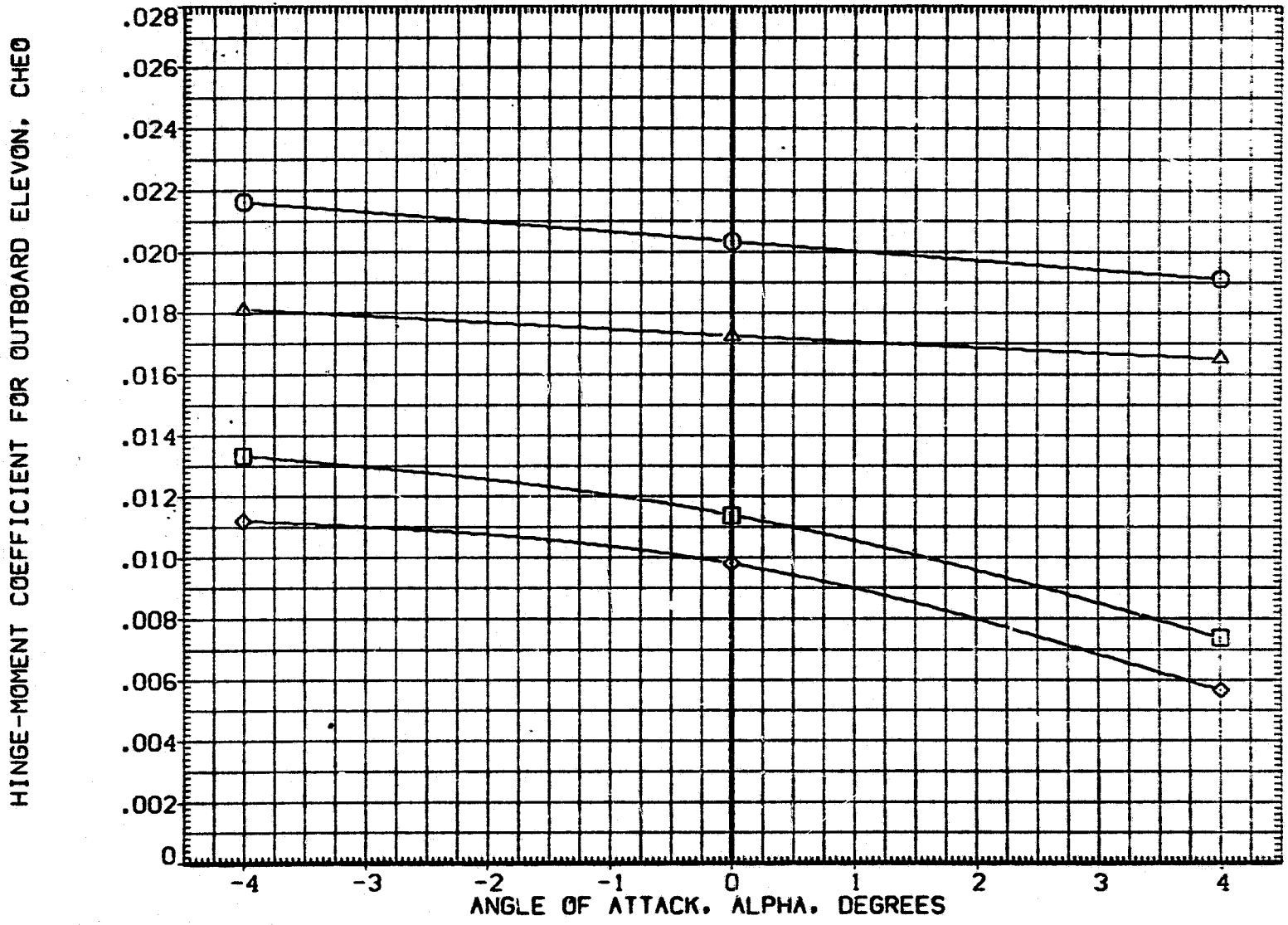



FIG. 9 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.6 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X84) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4X53) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 6.000 | 4.000 | .600 | 3.400 |
| (RE4X64) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

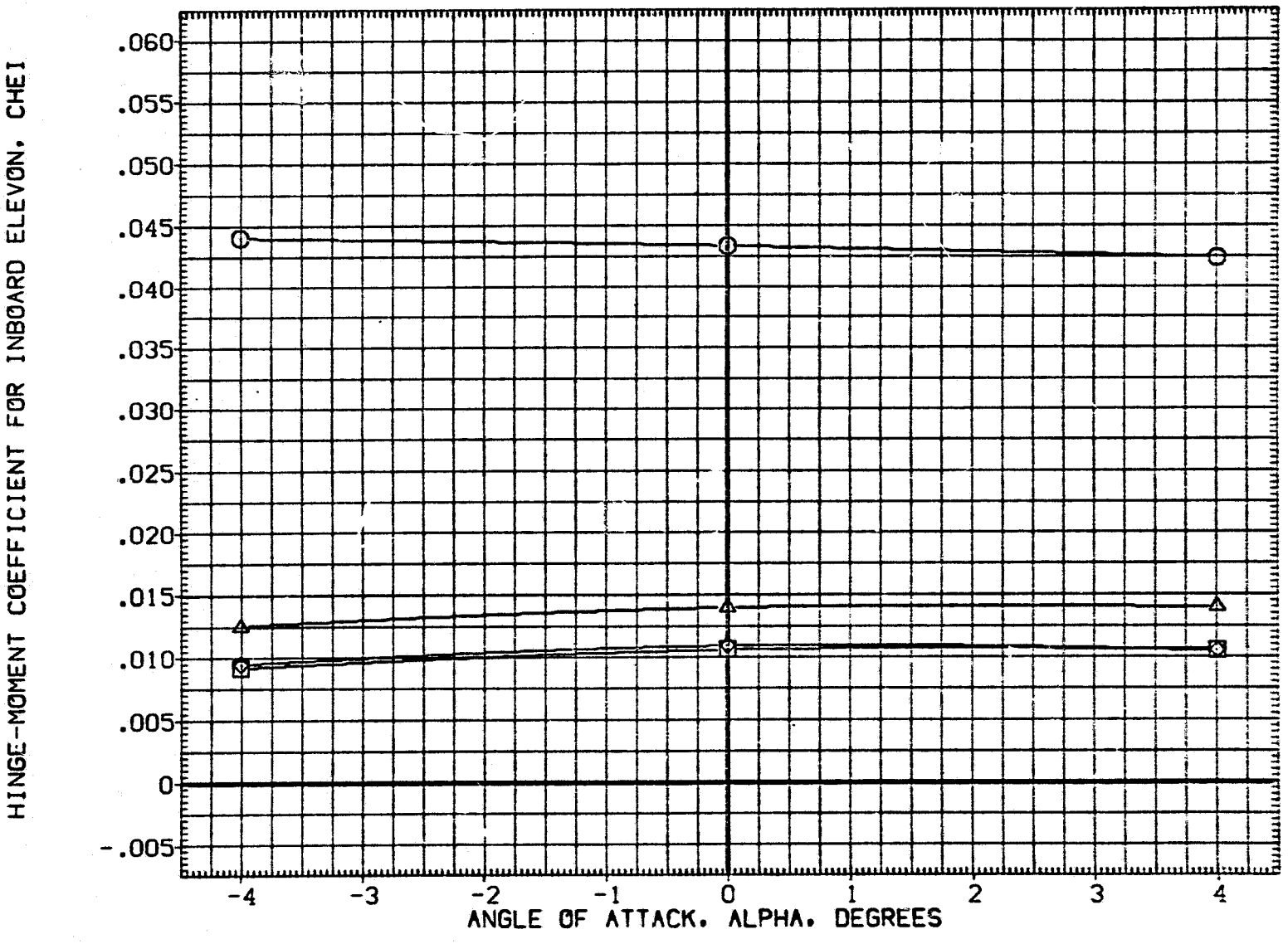



FIG. 9 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.6 PLUMEOFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X84) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4X53) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4X64) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

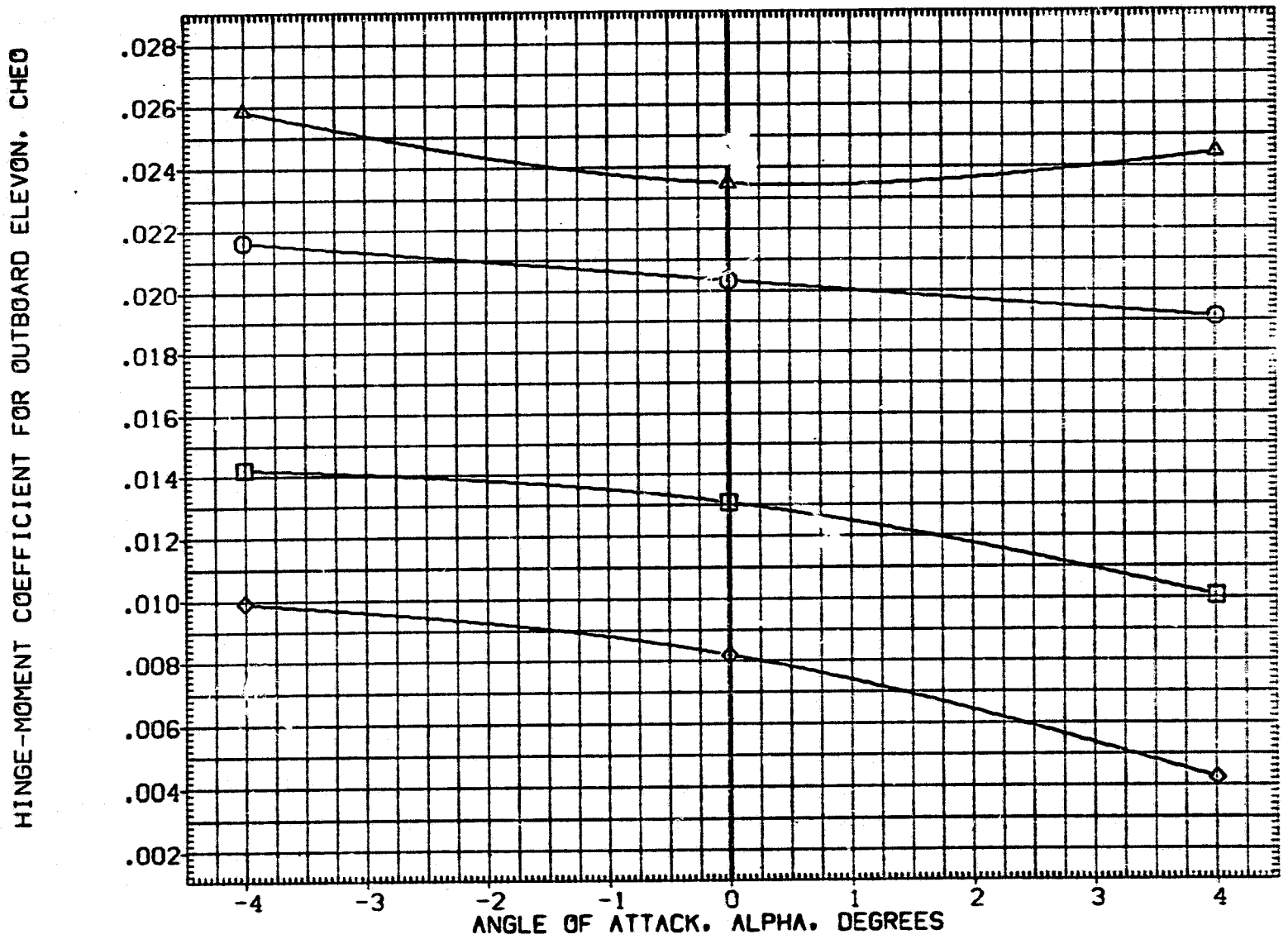



FIG. 9 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.6 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4XA1) | ◫ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .900 | 4.250 |
| (RE4X91) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4X75) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

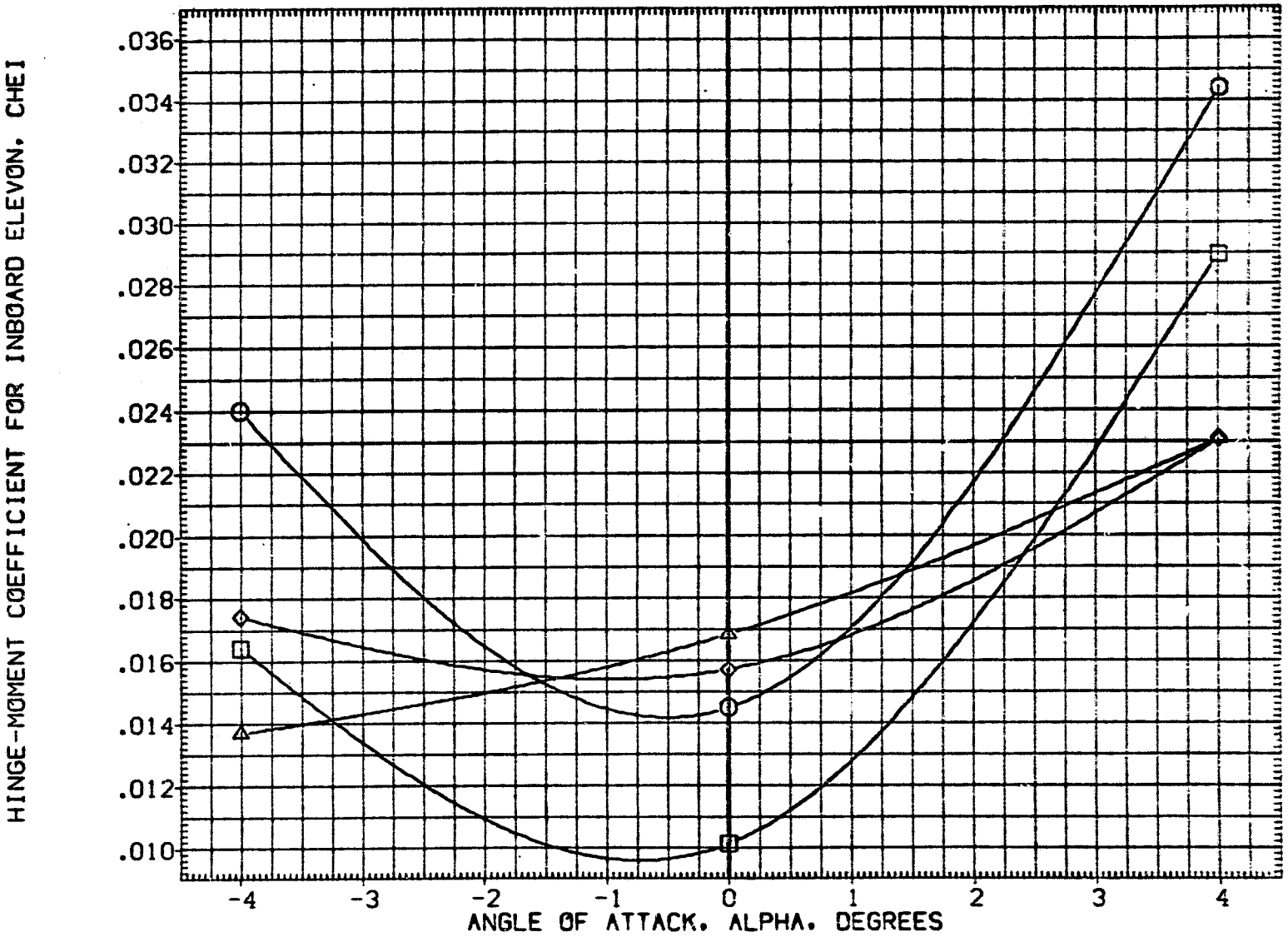



FIG. 10 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.9 PLUMEOFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X29) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4XA1) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .900 | 4.250 |
| (RE4X91) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4X75) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

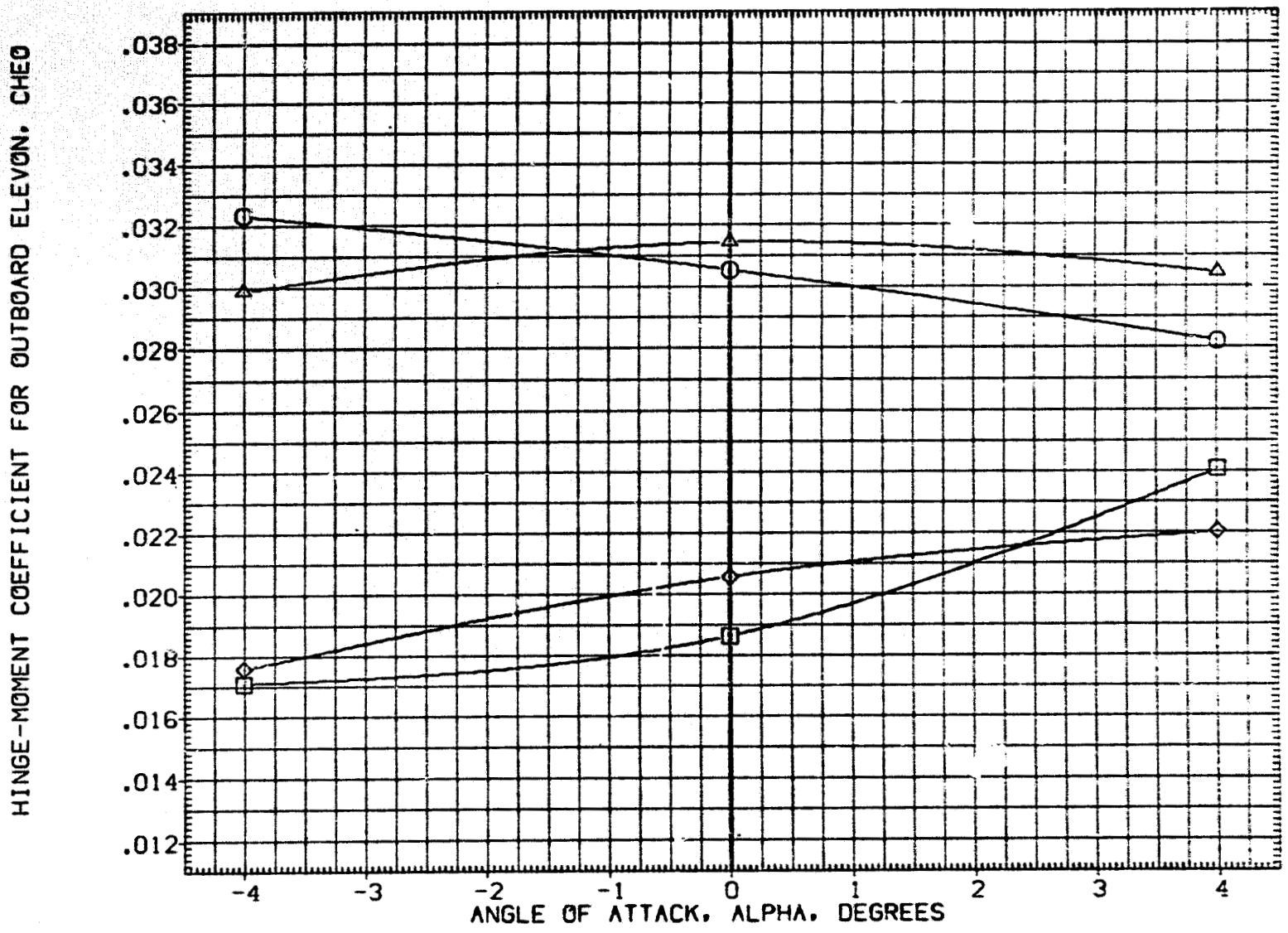



FIG. 10 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.9 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X85) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4X54) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X65) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1230.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

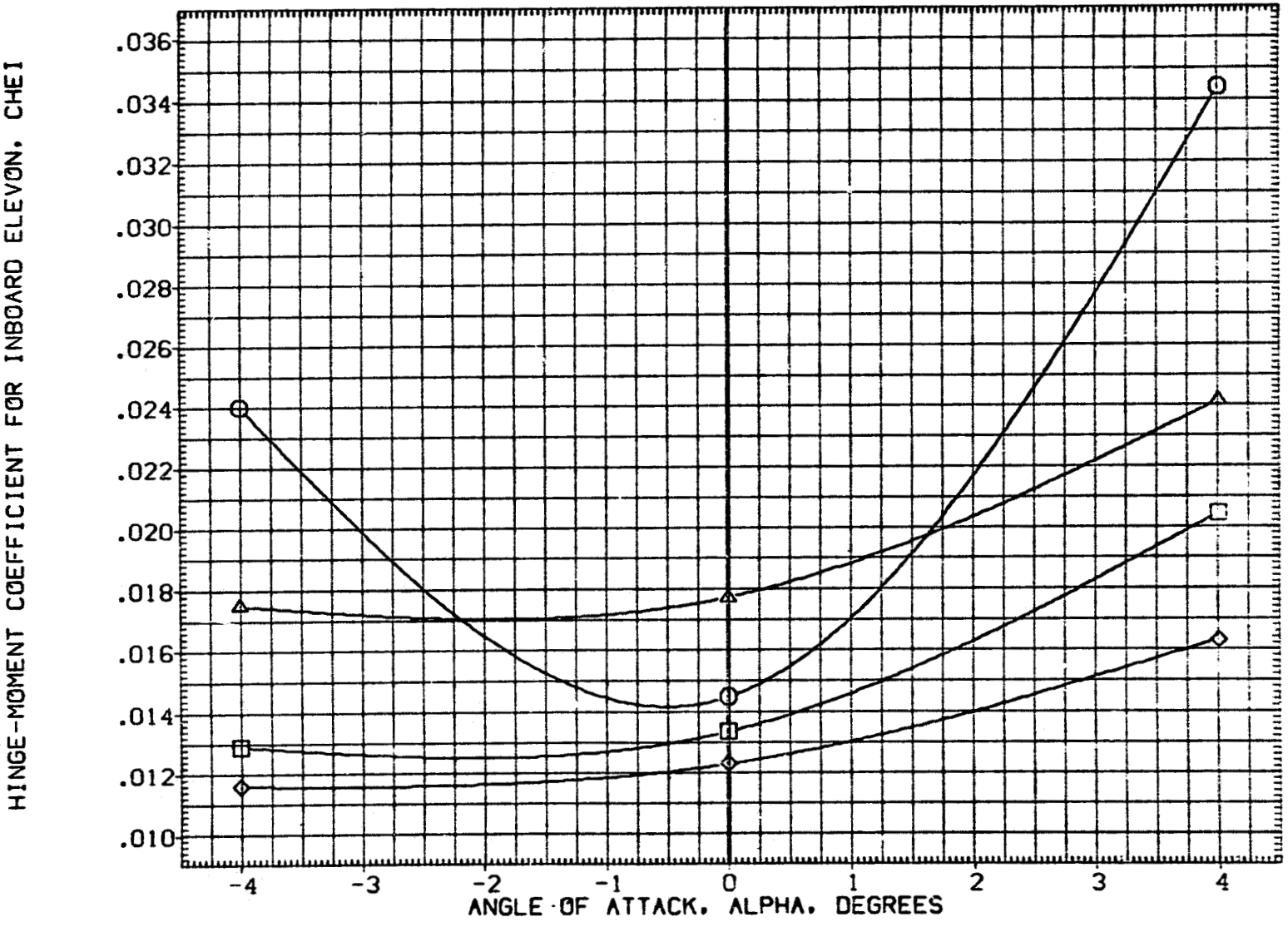



FIG. 10 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.9 PLUMEOFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X29) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X85) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4X54) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X65) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

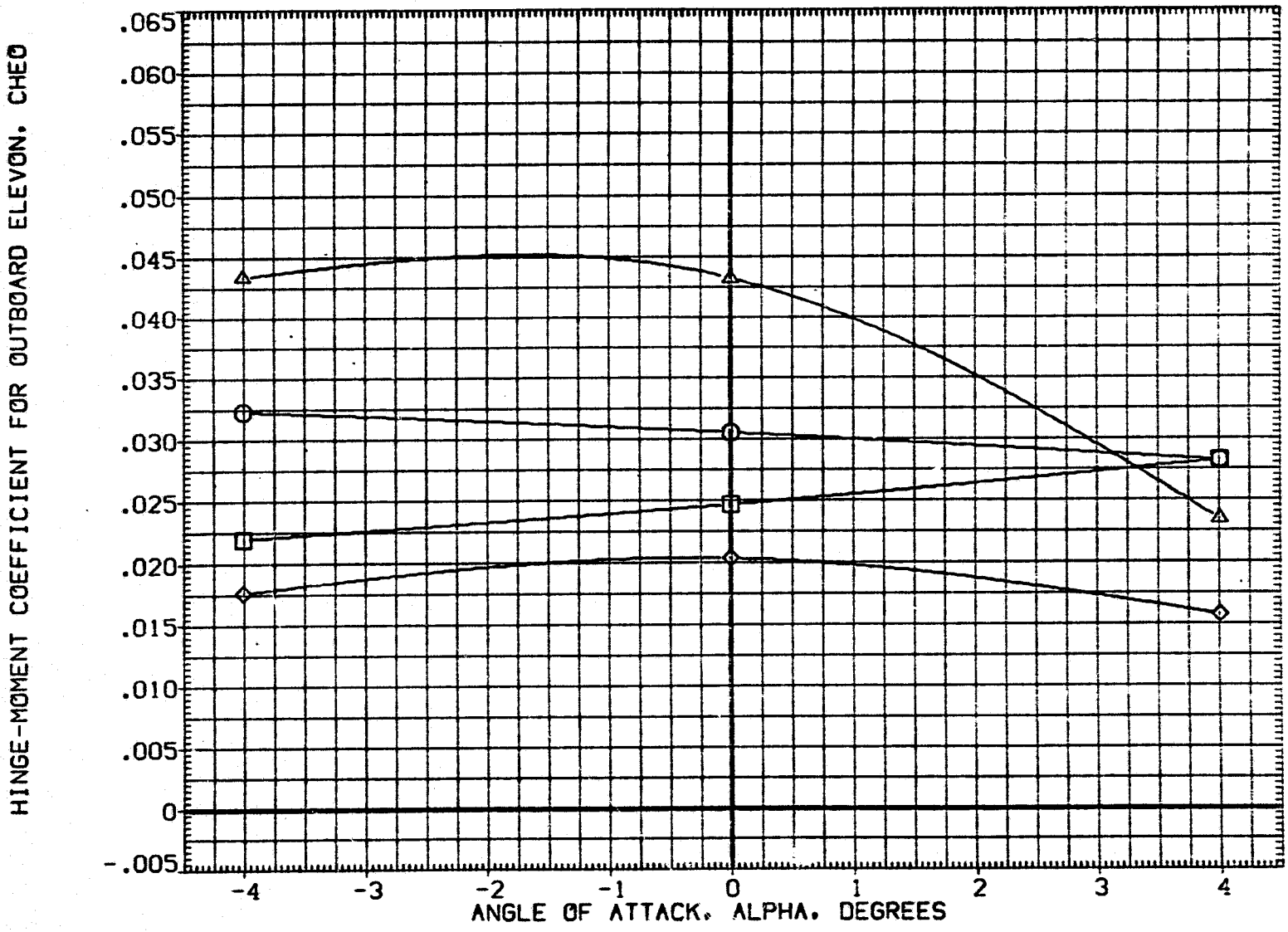



FIG. 10 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH,M=0.9 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XA2) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4X92) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4X76) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

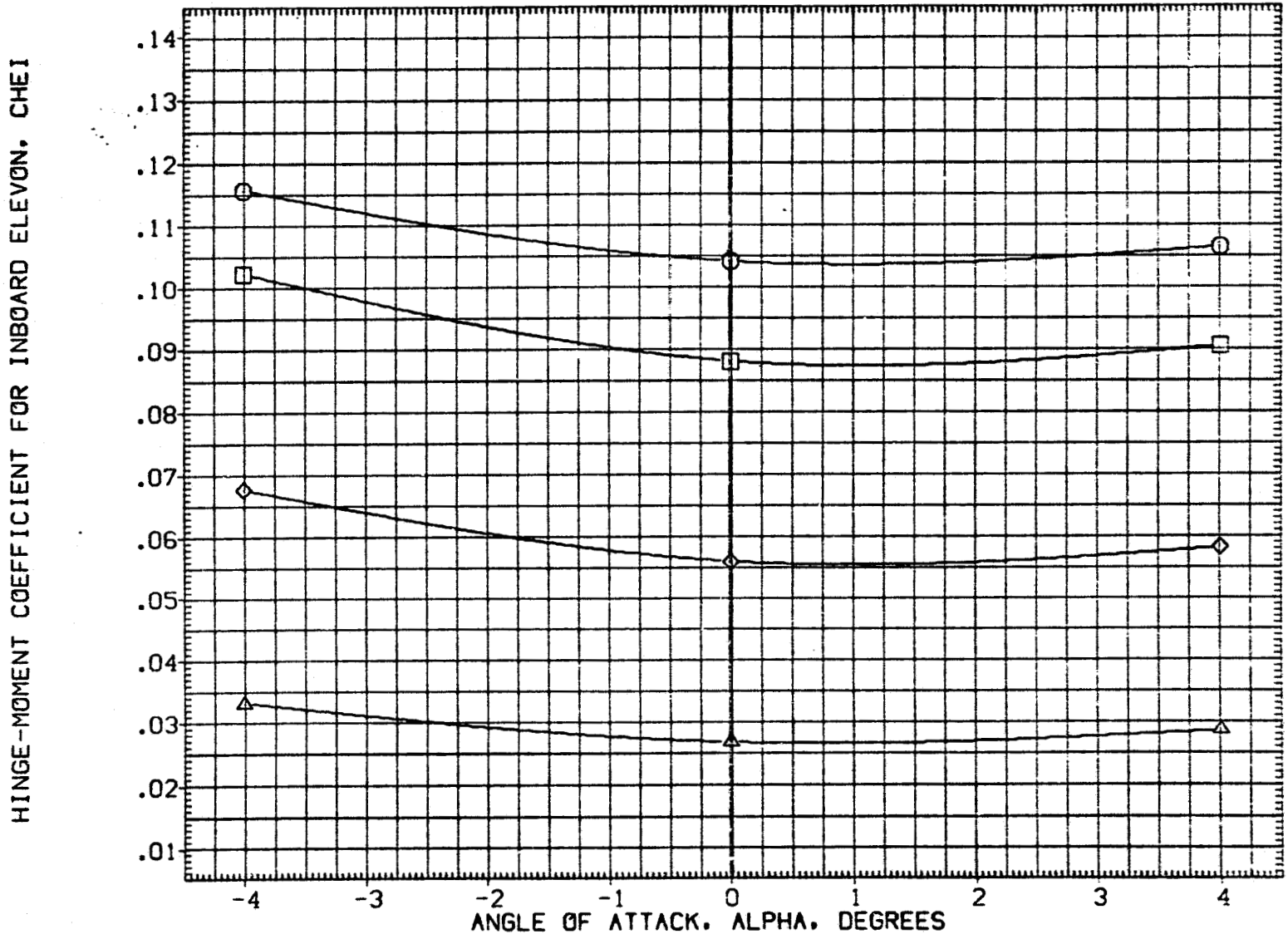



FIG. 11 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.1 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XA2) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4X92) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4X76) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

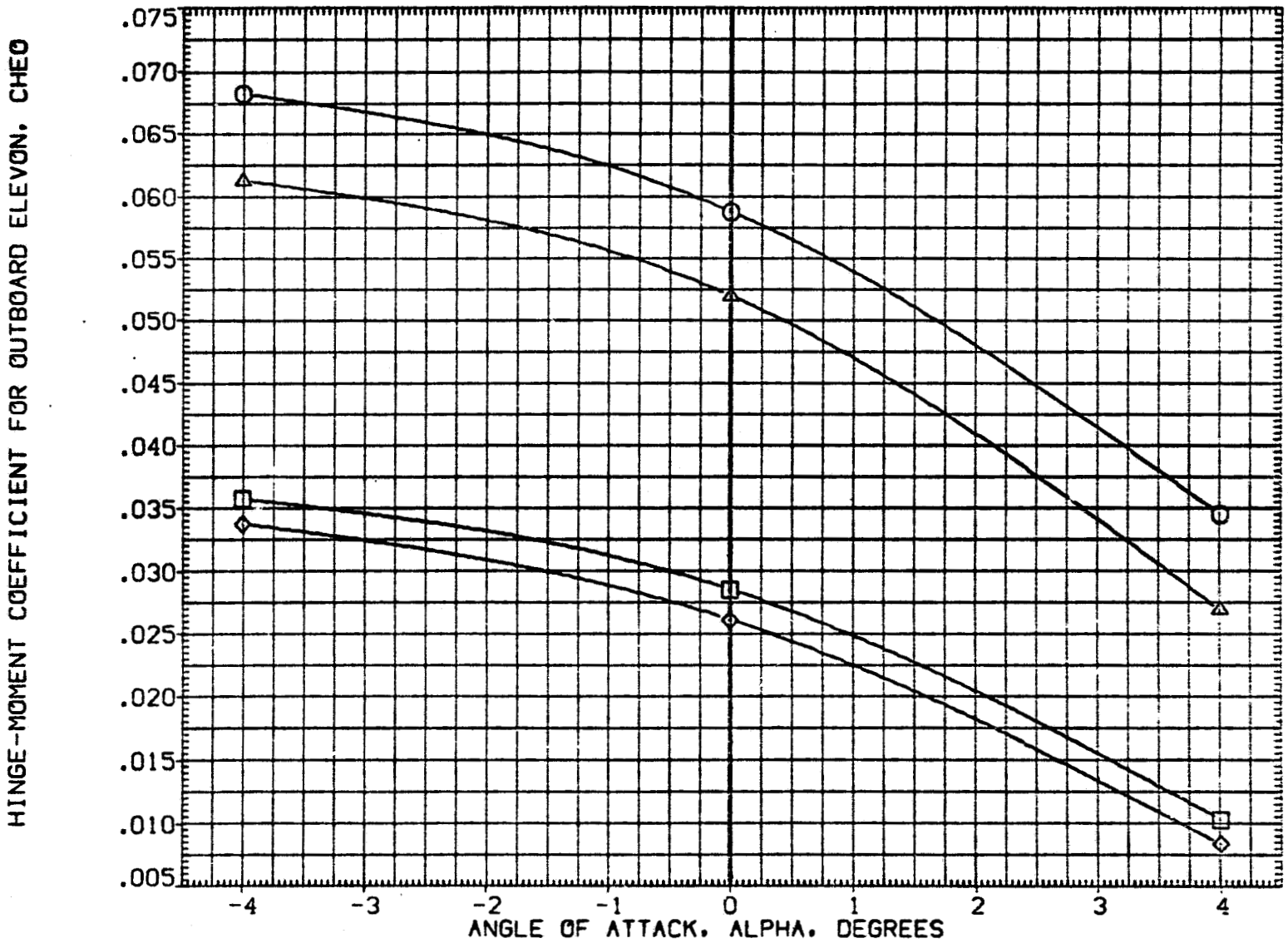



FIG. 11 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH,M=1.1 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X86) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4X55) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4X66) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

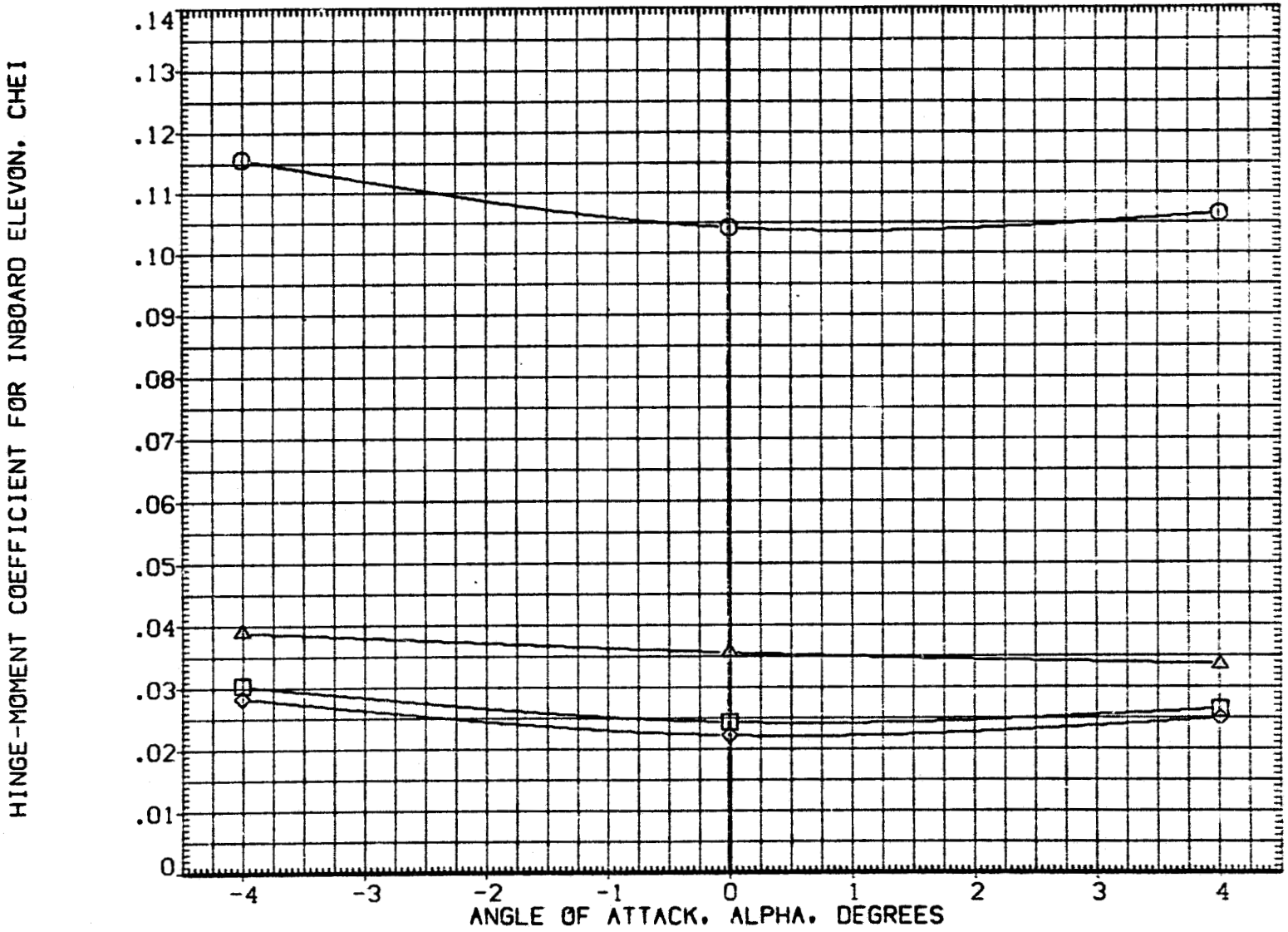



FIG. 11 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.1 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X86) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4X55) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4X66) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

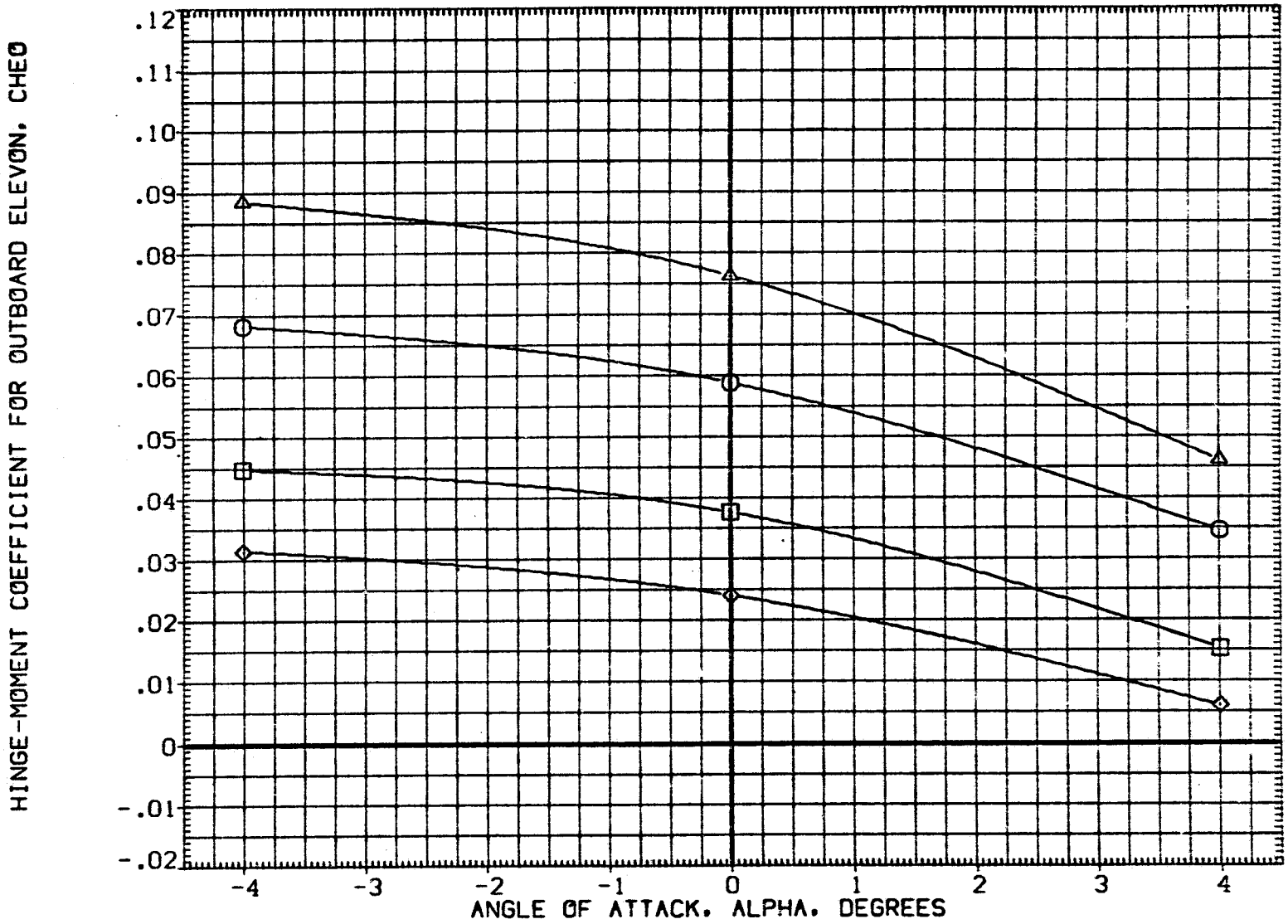



FIG. 11 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.1 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XA3) | ⊡ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4X93) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4X77) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

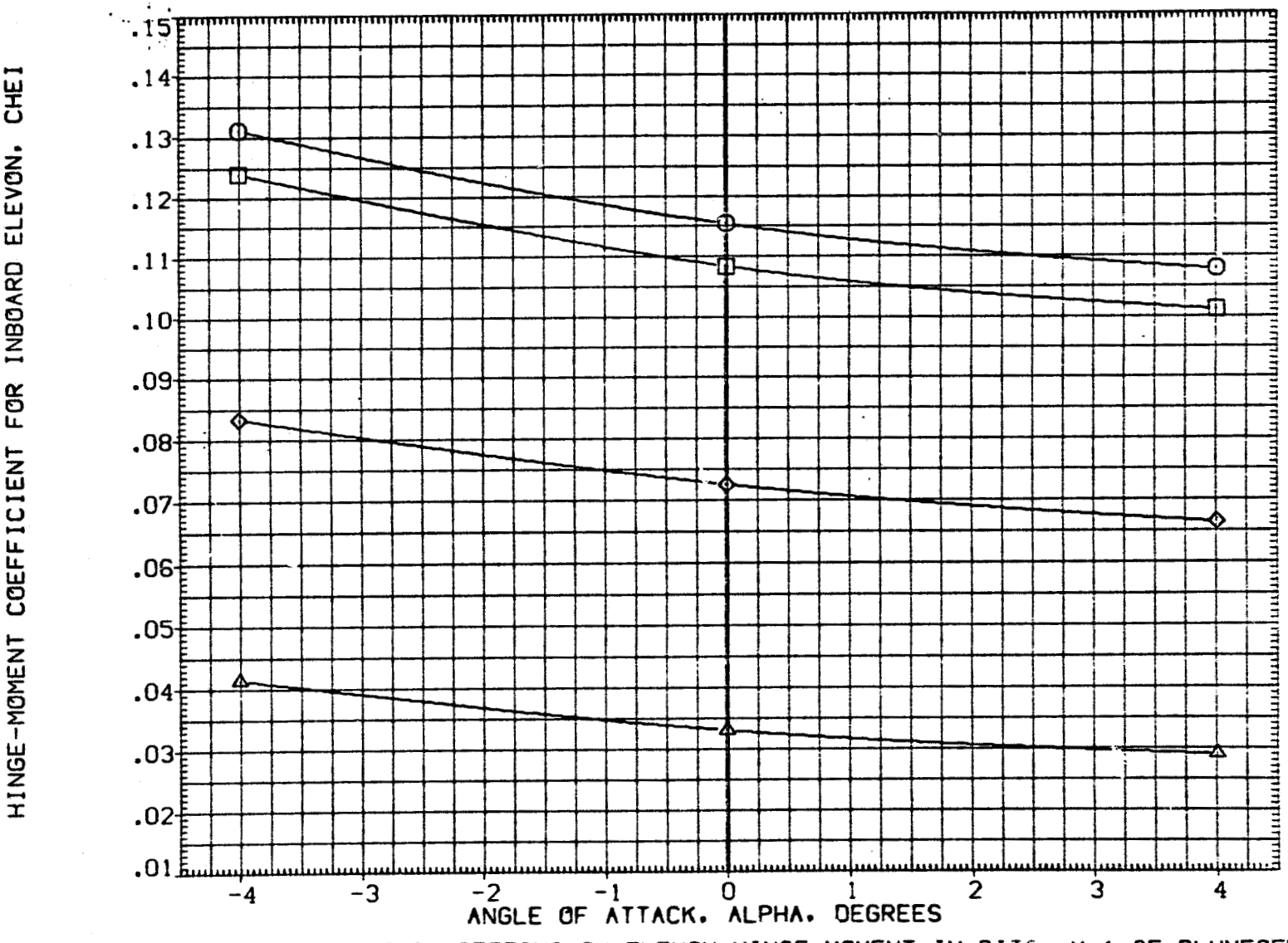



FIG. 12 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH,M=1.25 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XA3) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4X93) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4X77) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .00^ | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

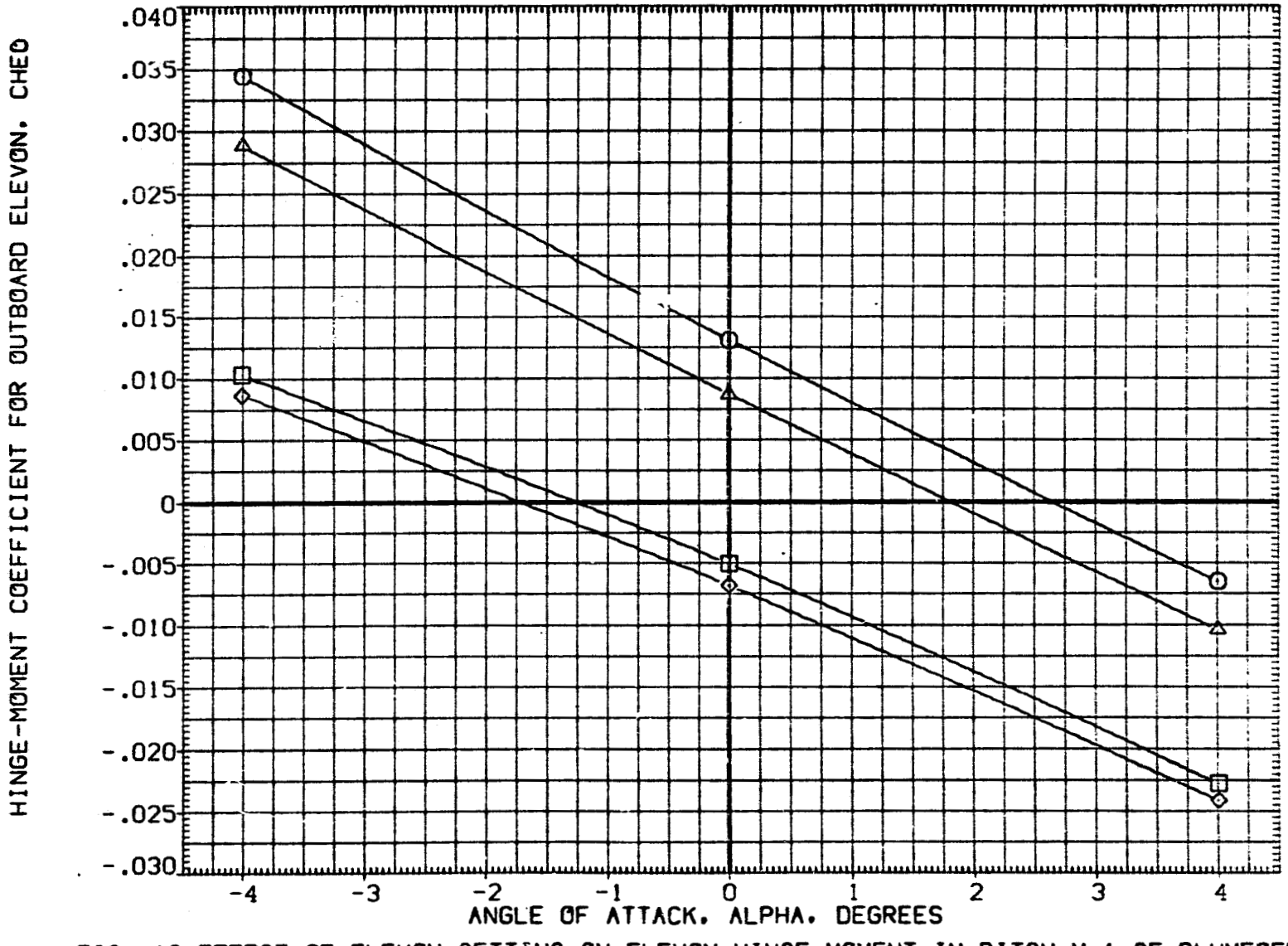



FIG. 12 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.25 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X56) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

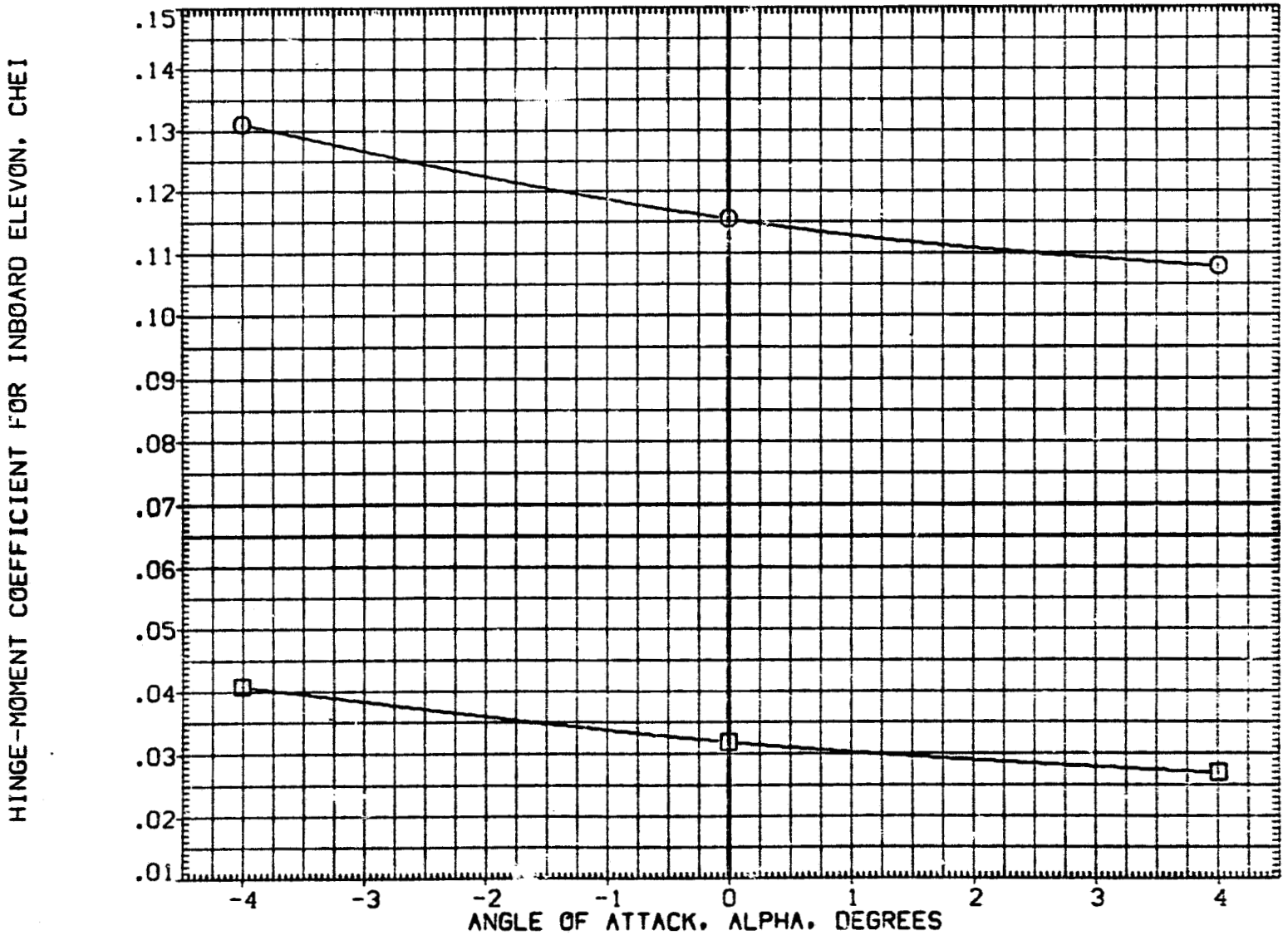



FIG. 12 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.25 PLUMEOFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X31) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X56) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

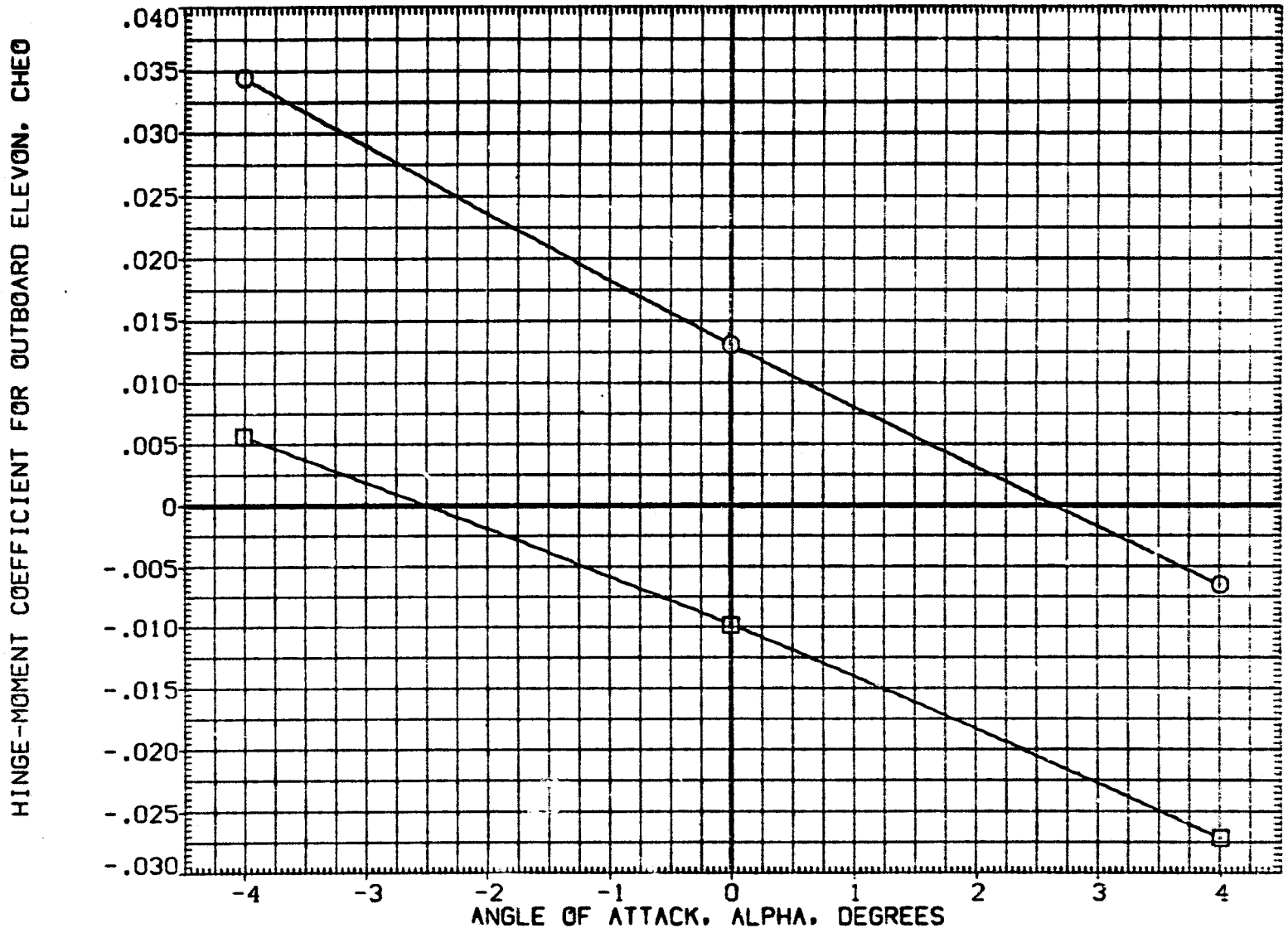



FIG. 12 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.25 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XA4) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4X94) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4X78) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

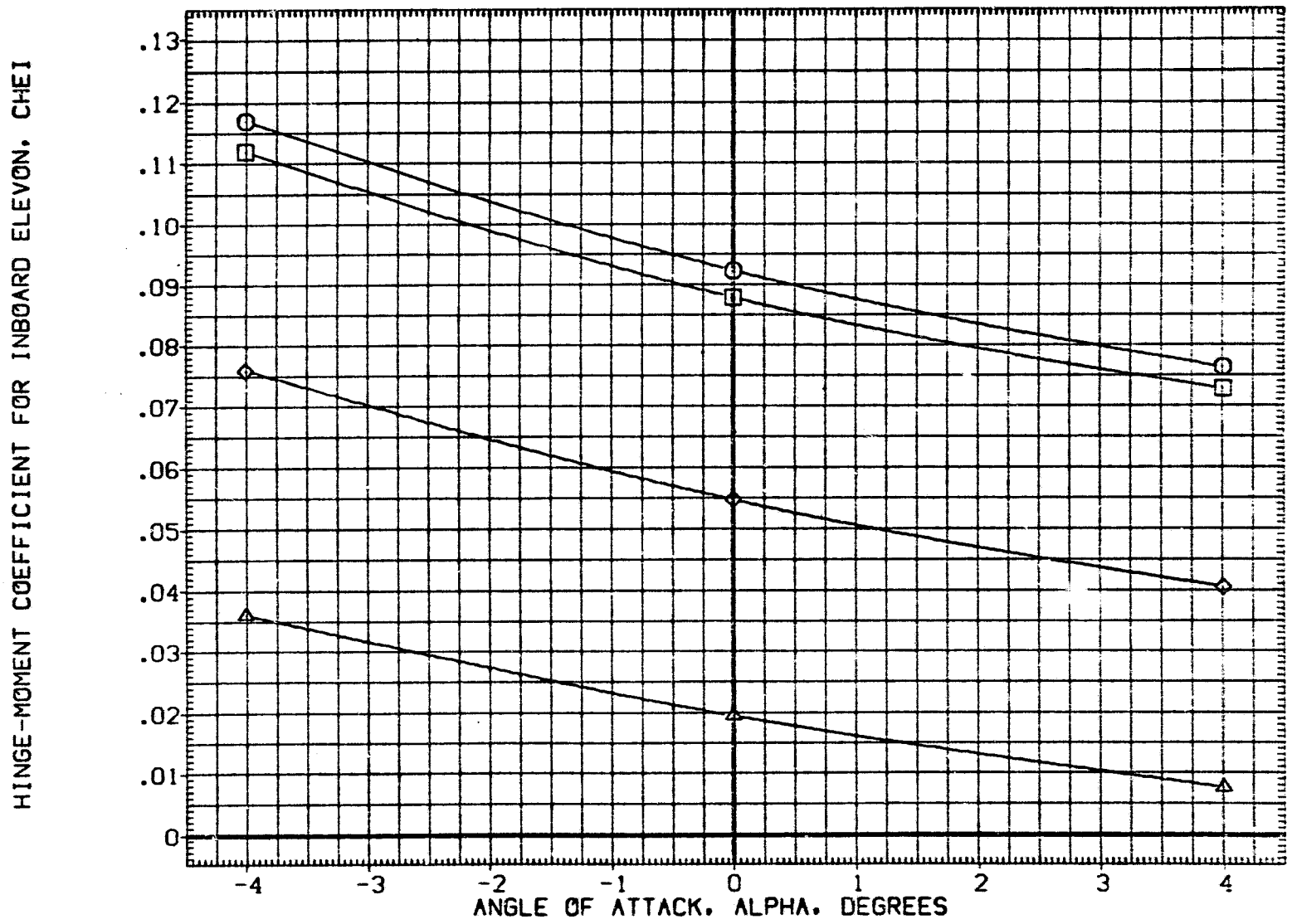



FIG. 13 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.4 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XA4) | □ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4X94) | ◇ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4X78) | △ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

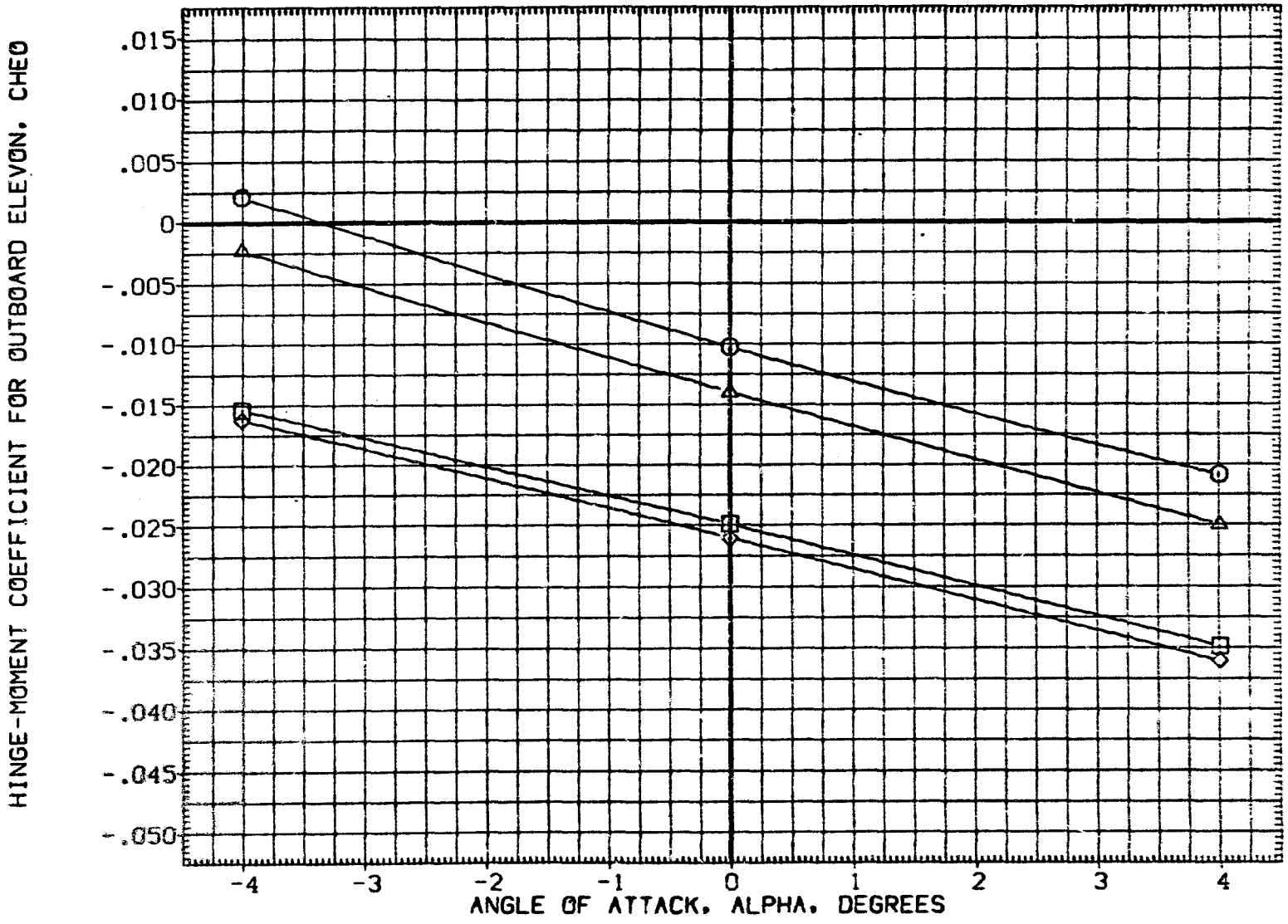



FIG. 13 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.4 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X57) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.400 | 4.250 |
| (RE4X68) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

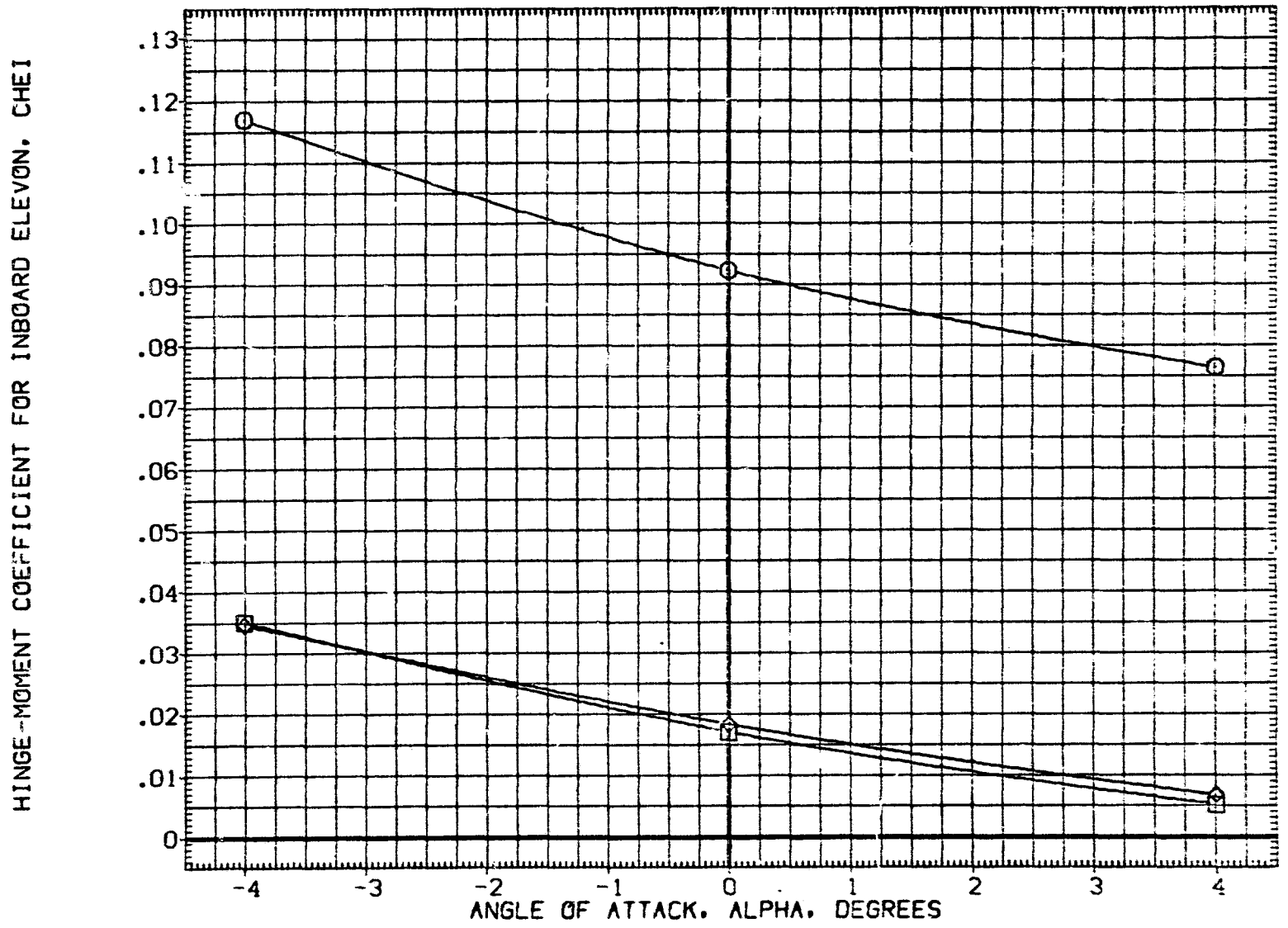



FIG. 13 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.4 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X57) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.400 | 4.250 |
| (RE4X68) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

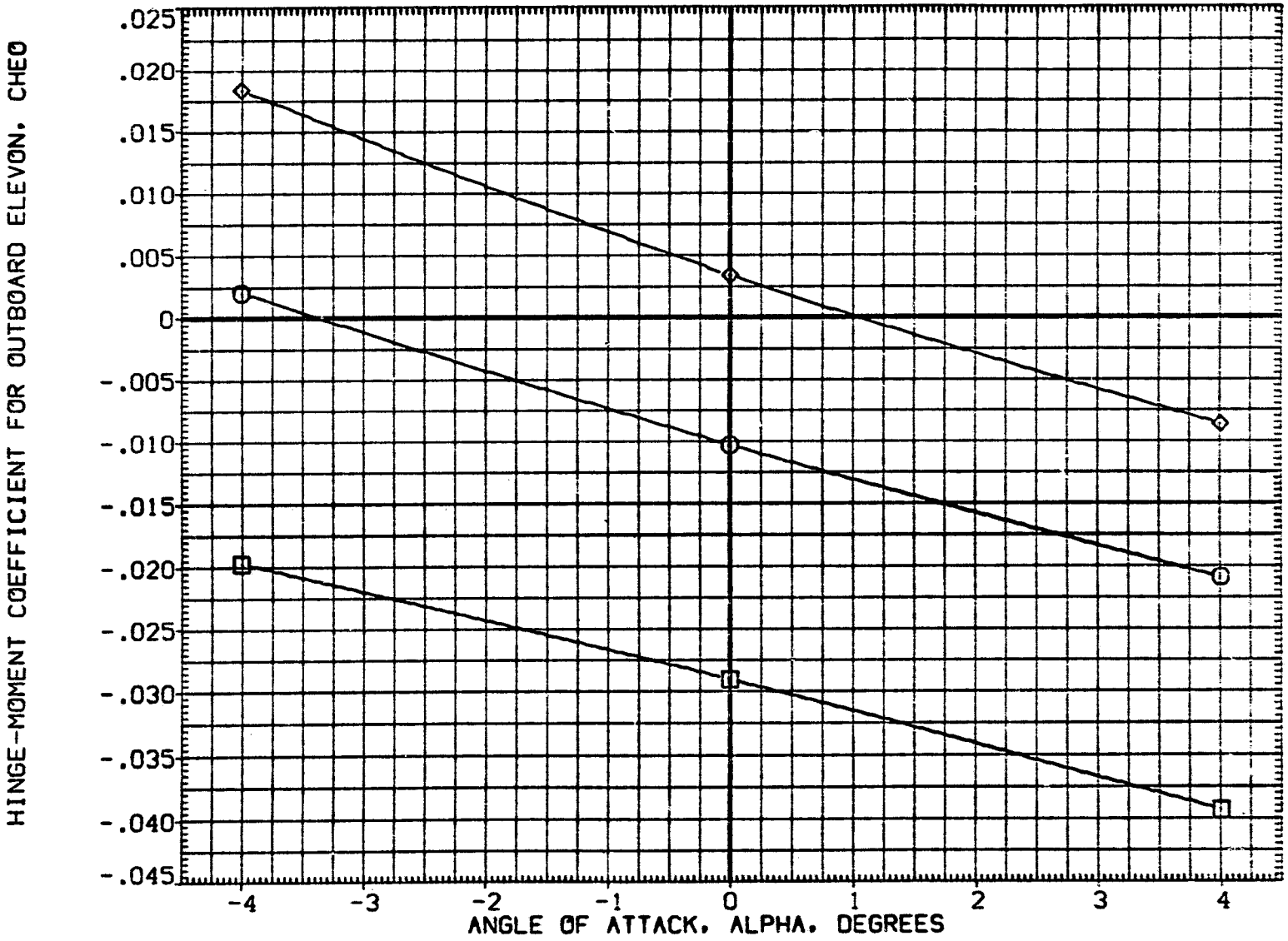



FIG. 13 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.4 PLUMEOFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4YA0) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .600 | 3.400 |
| (RE4Y90) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4Y74) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

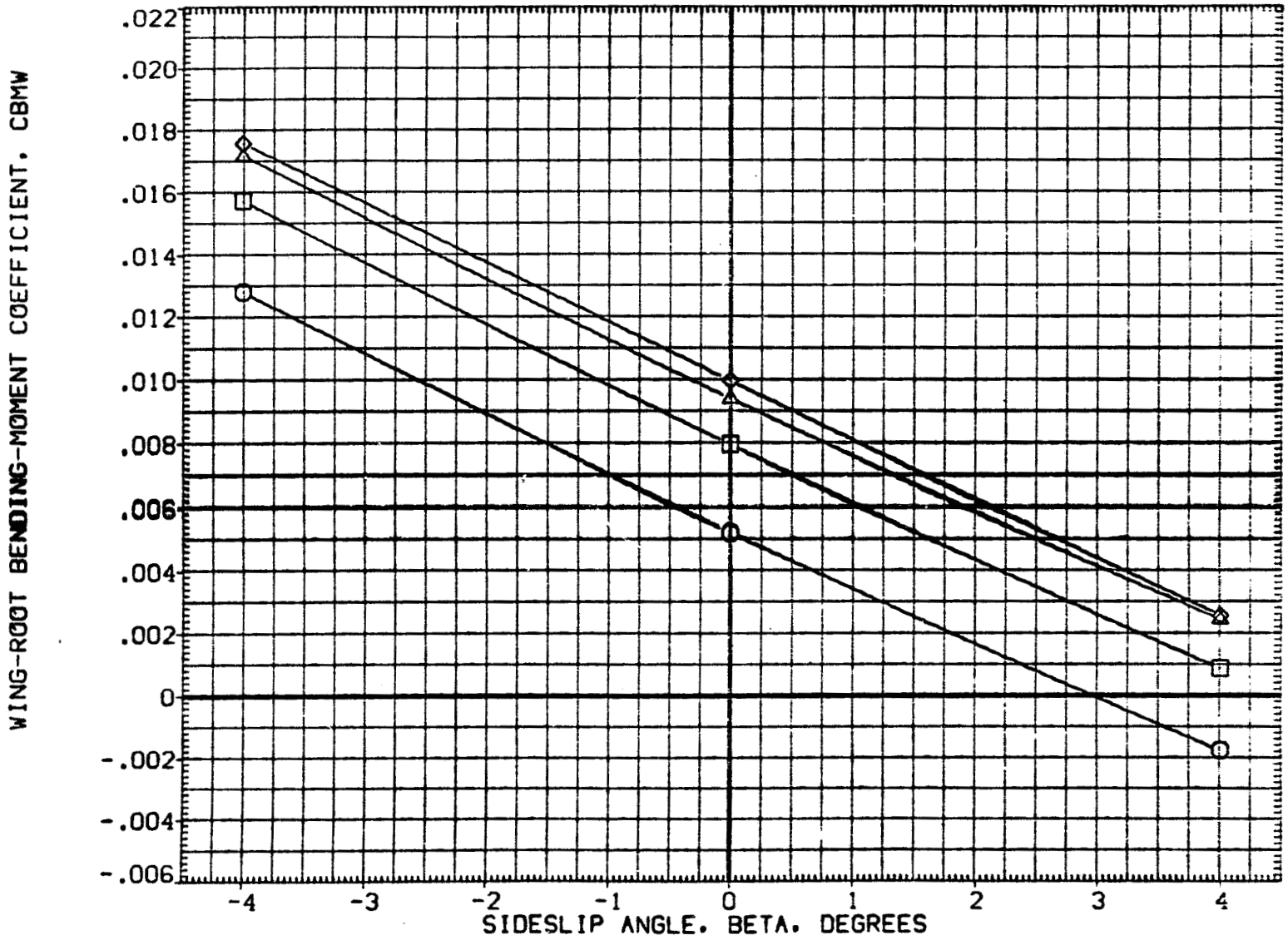



FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4YA0) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .600 | 3.400 |
| (RE4Y90) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4Y74) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

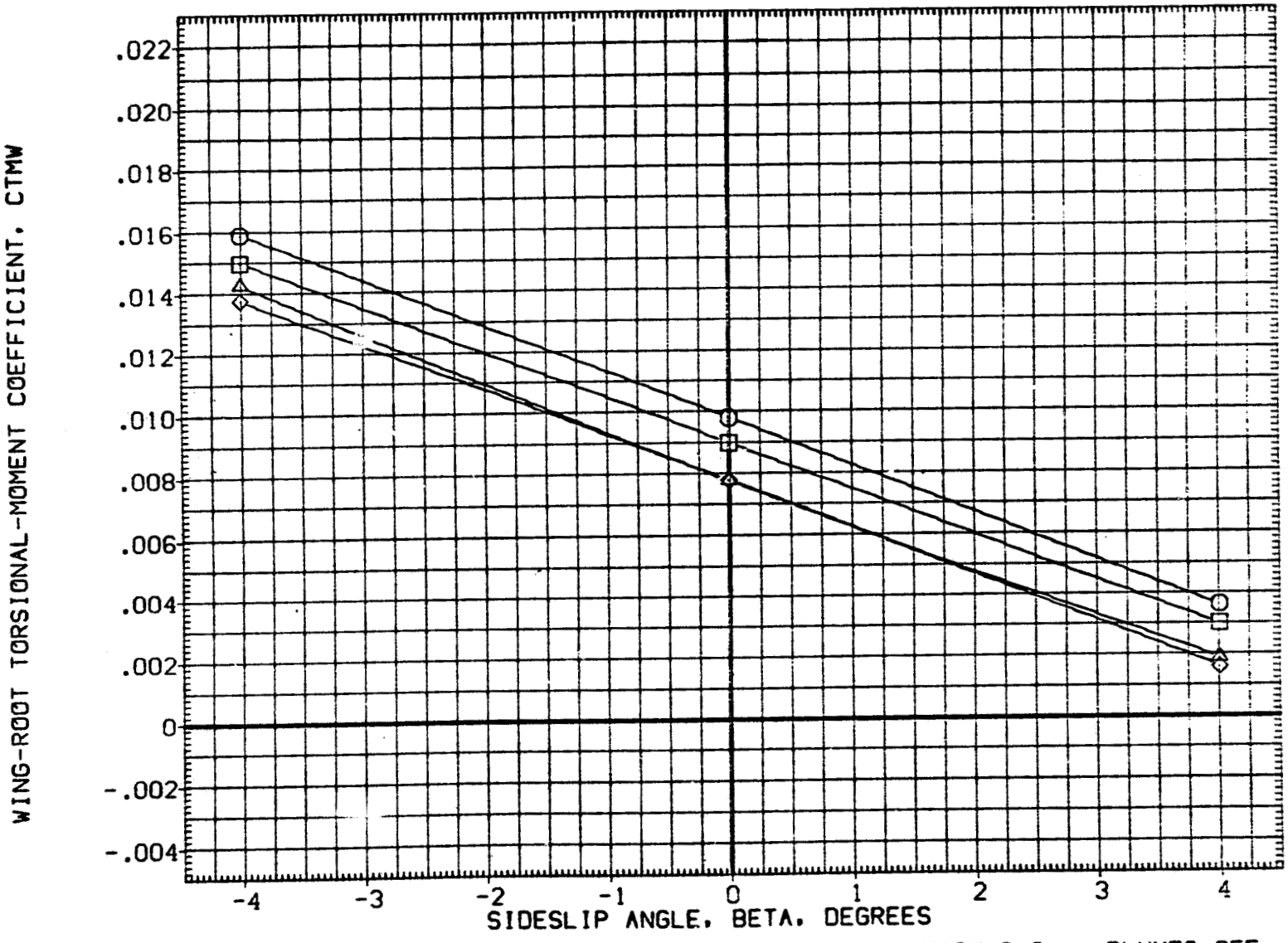



FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4YA0) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .600 | 3.400 |
| (RE4Y90) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4Y74) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

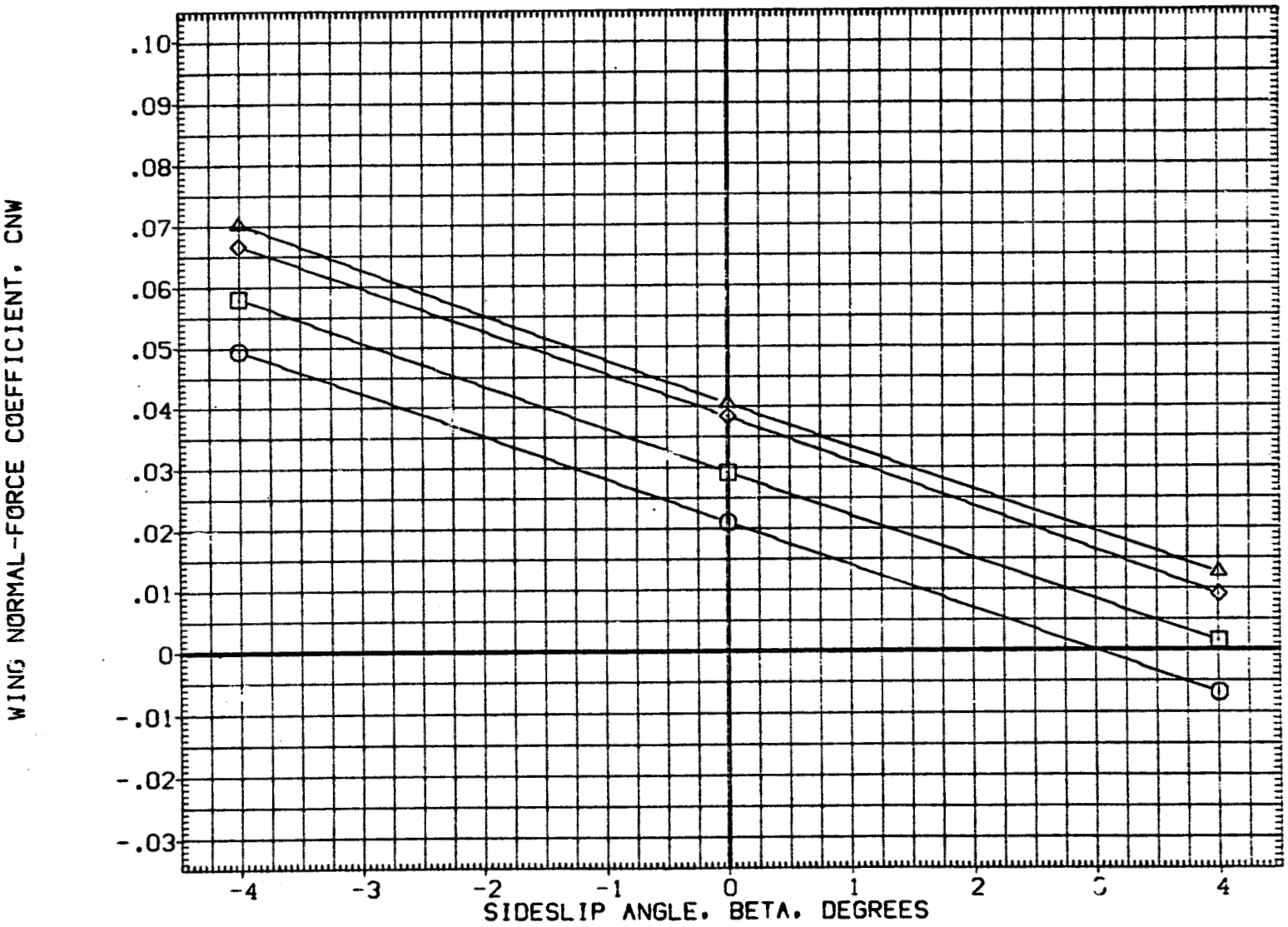



FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y84) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4Y53) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4Y64) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

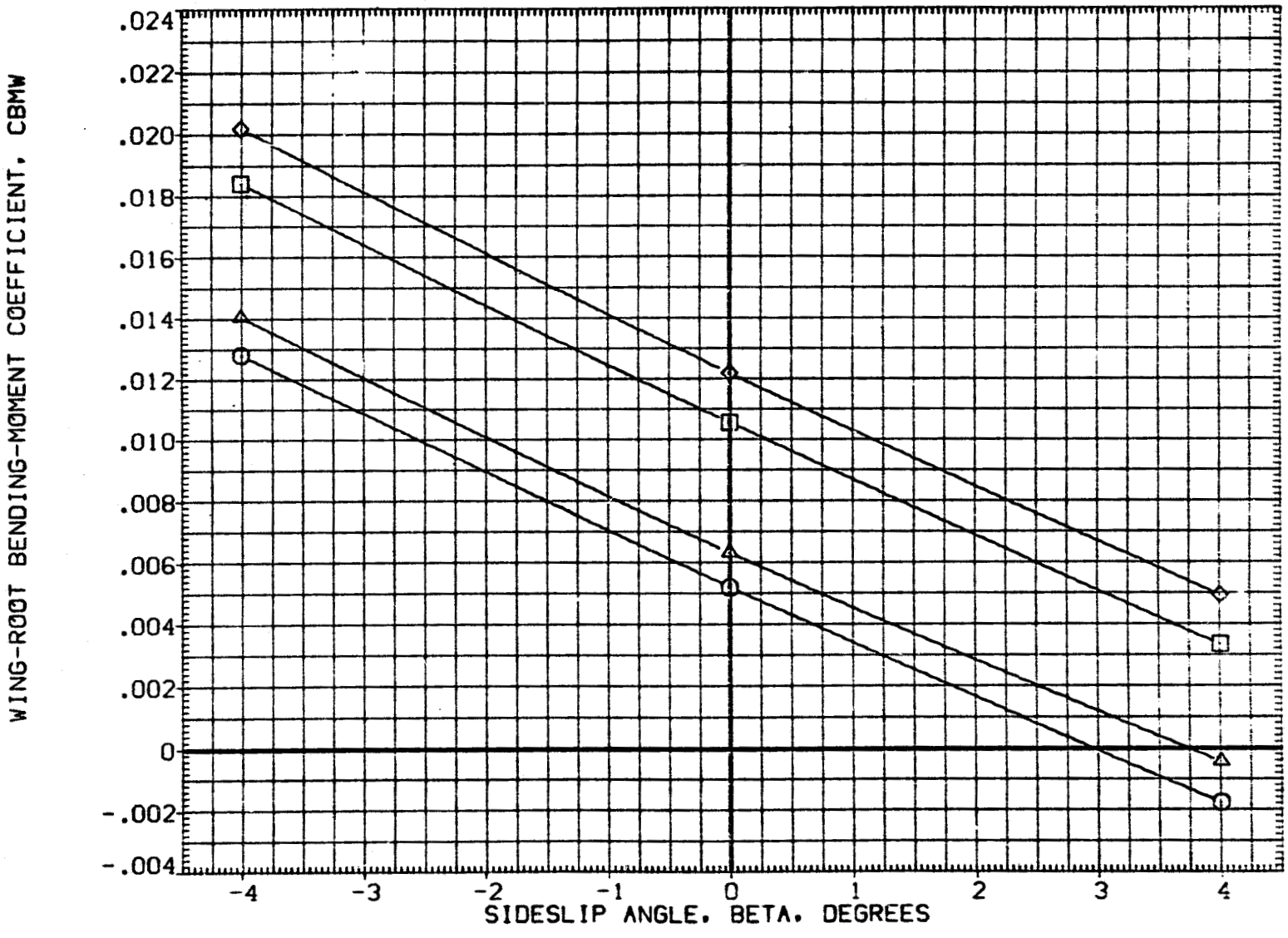



FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y84) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4Y53) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4Y64) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

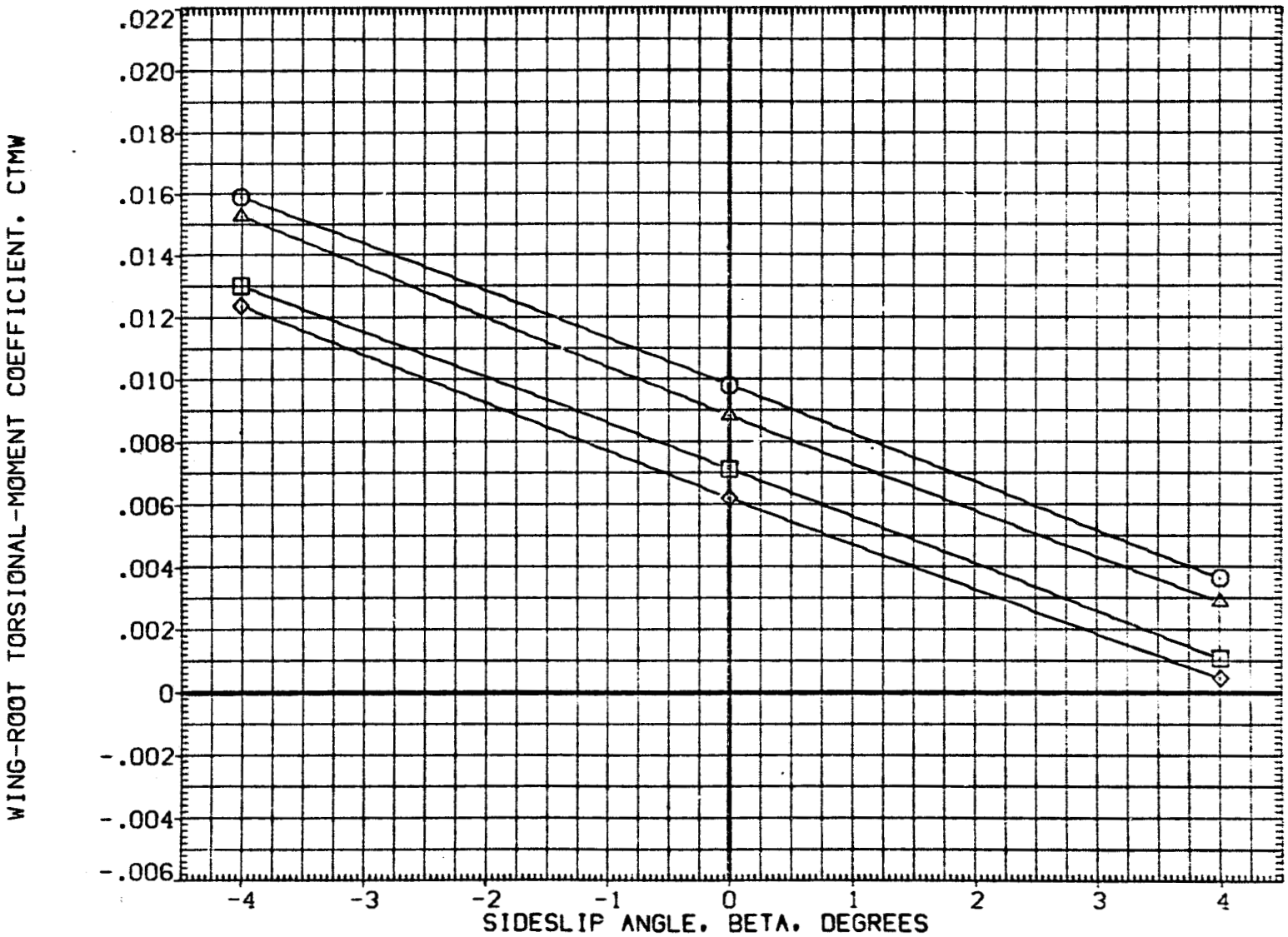



FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y84) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4Y53) | ⊠ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4Y64) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

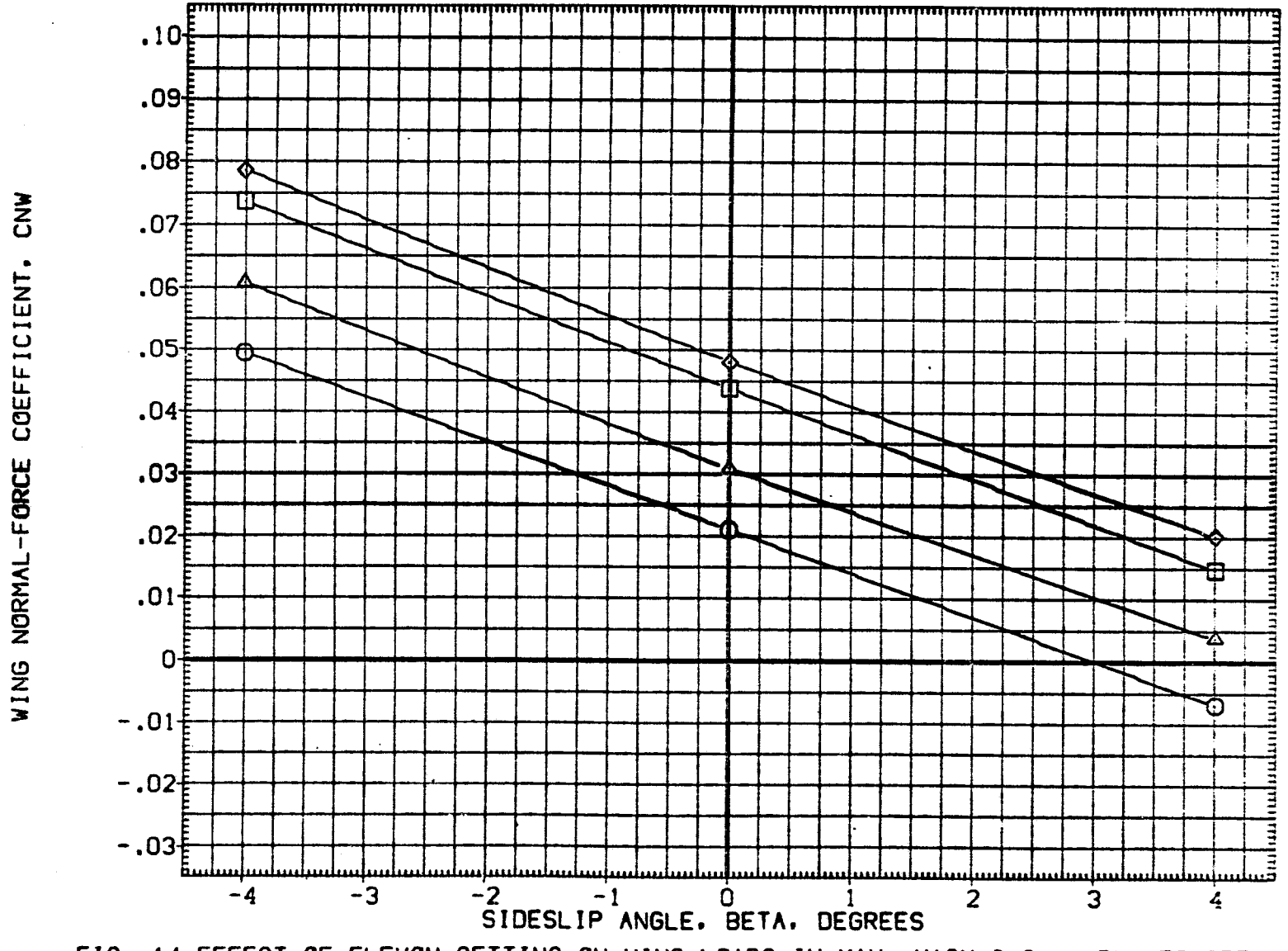



FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4YA1) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .900 | 4.250 |
| (RE4Y91) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4Y75) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

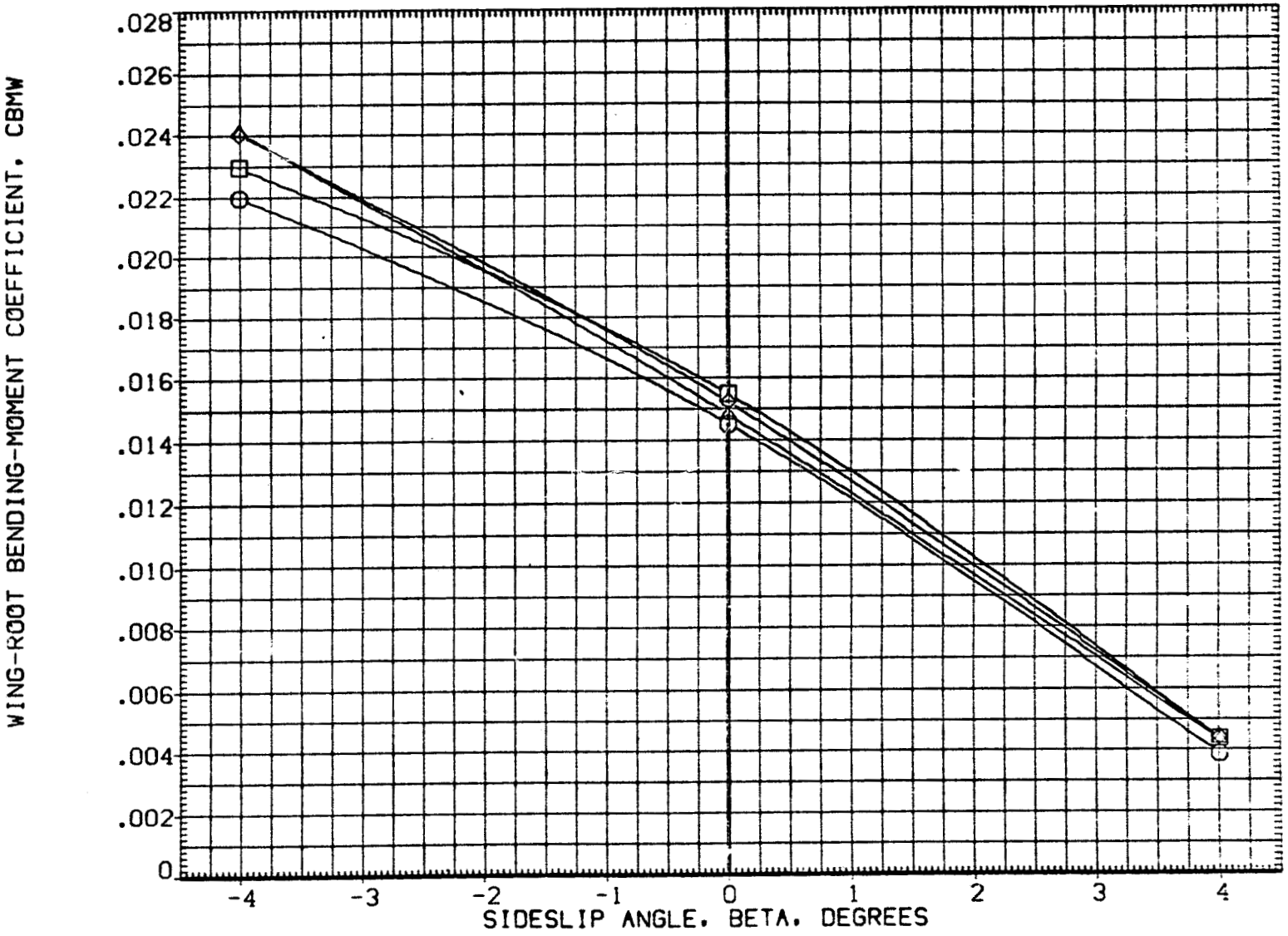



FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y29) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4YA1) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .900 | 4.250 |
| (RE4Y91) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4Y75) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

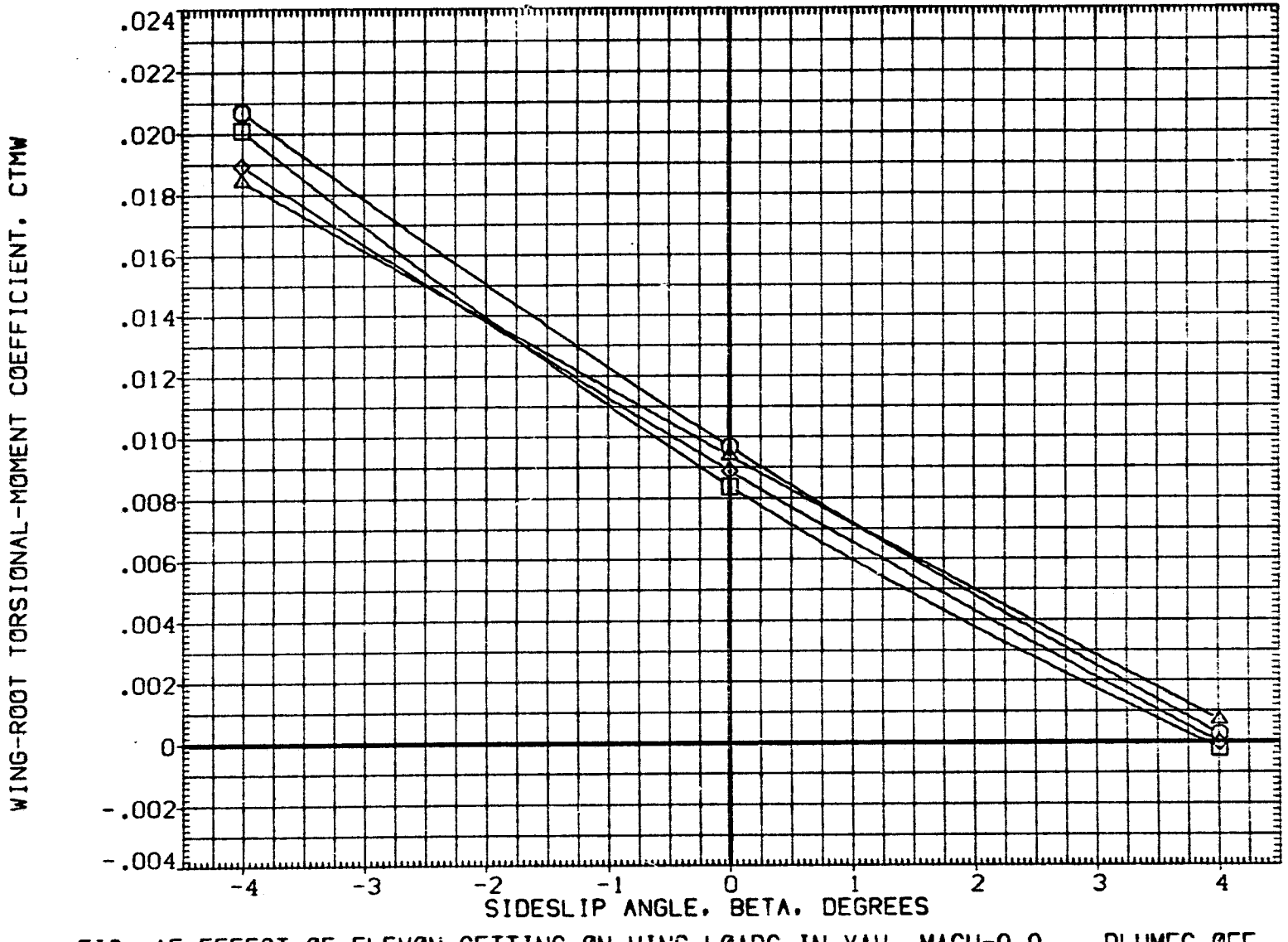



FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4YA1) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .900 | 4.250 |
| (RE4Y91) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4Y75) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

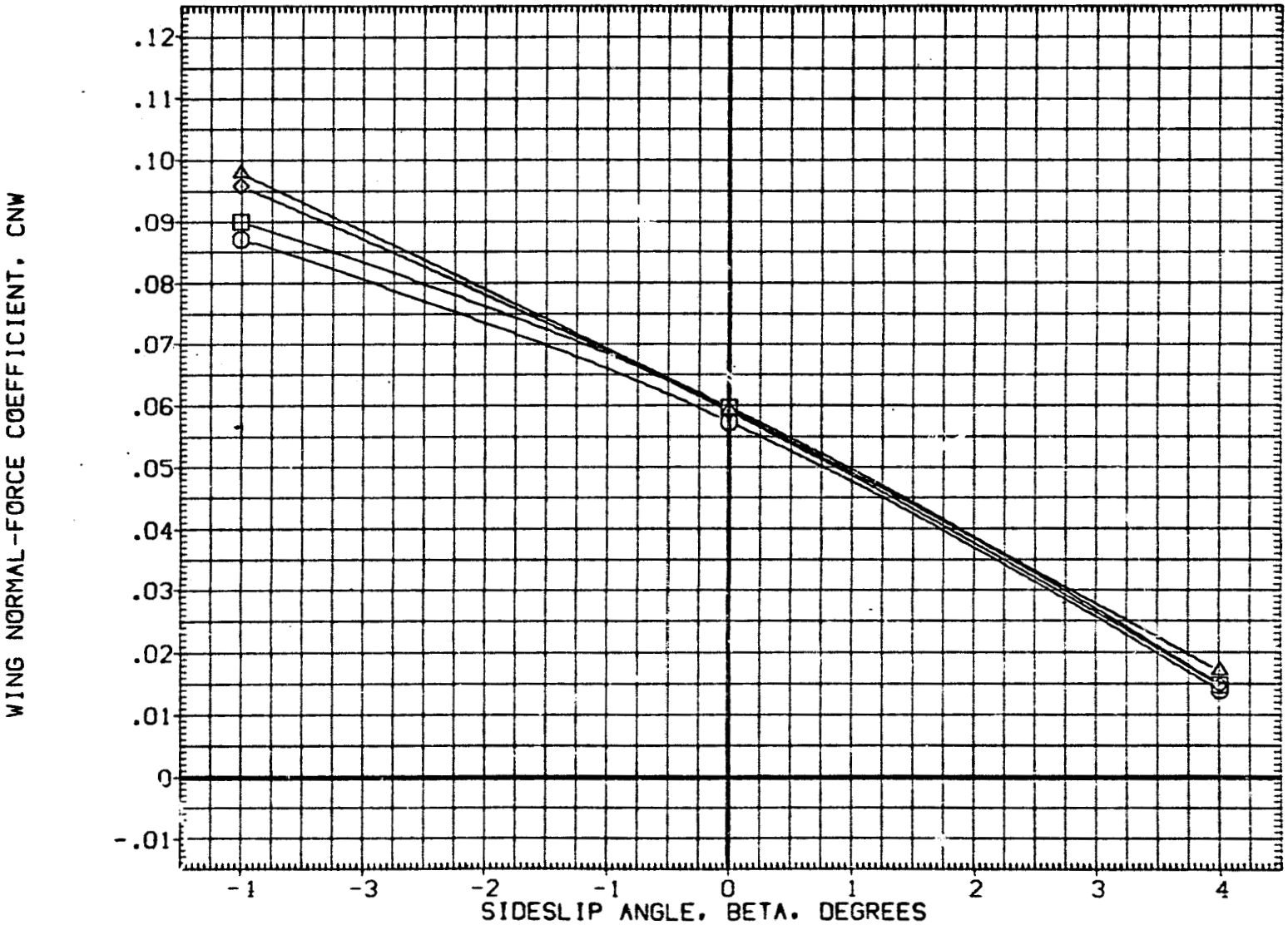



FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y29) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y85) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4Y54) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4Y65) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

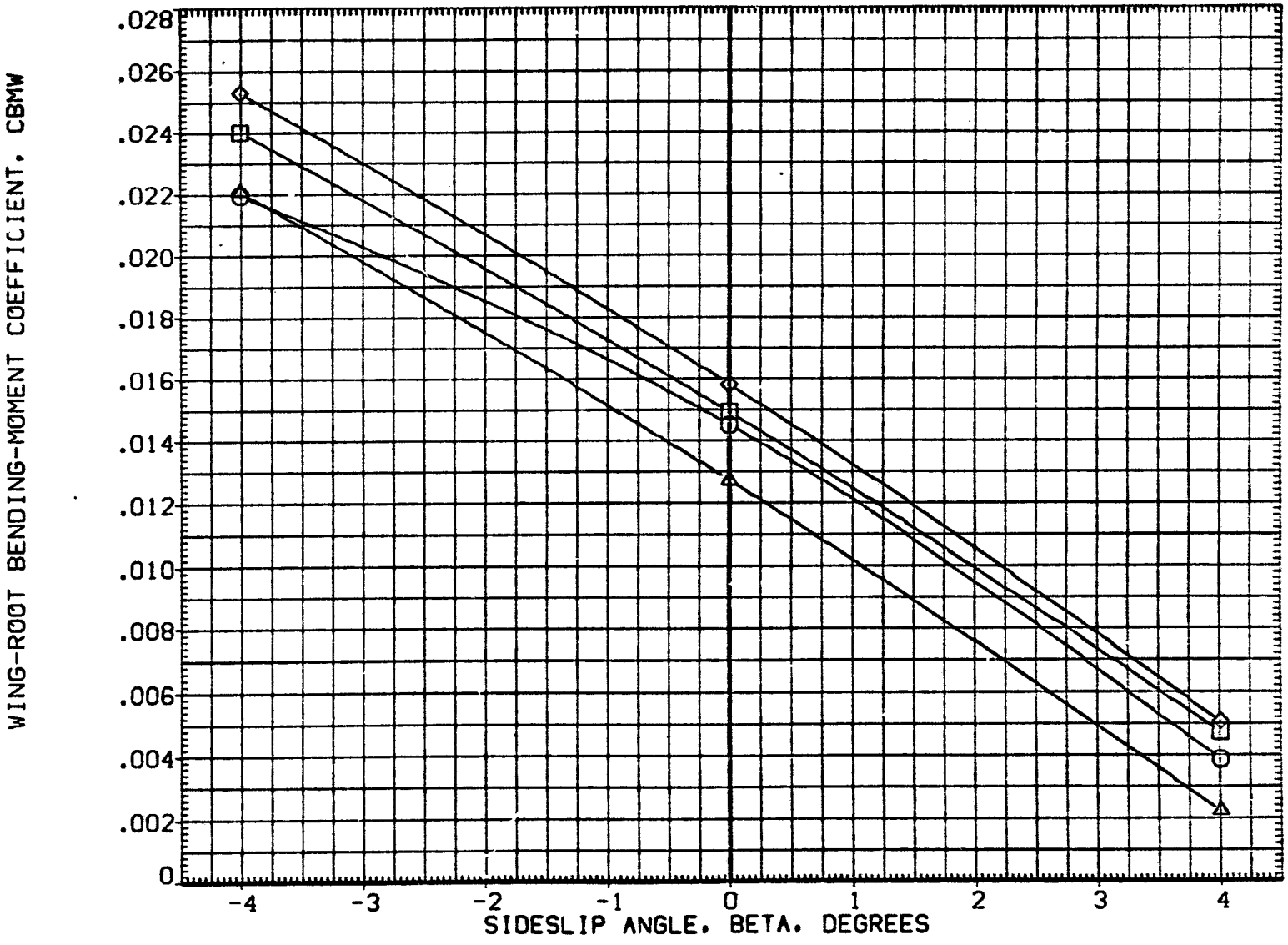



FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y85) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4Y54) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4Y65) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

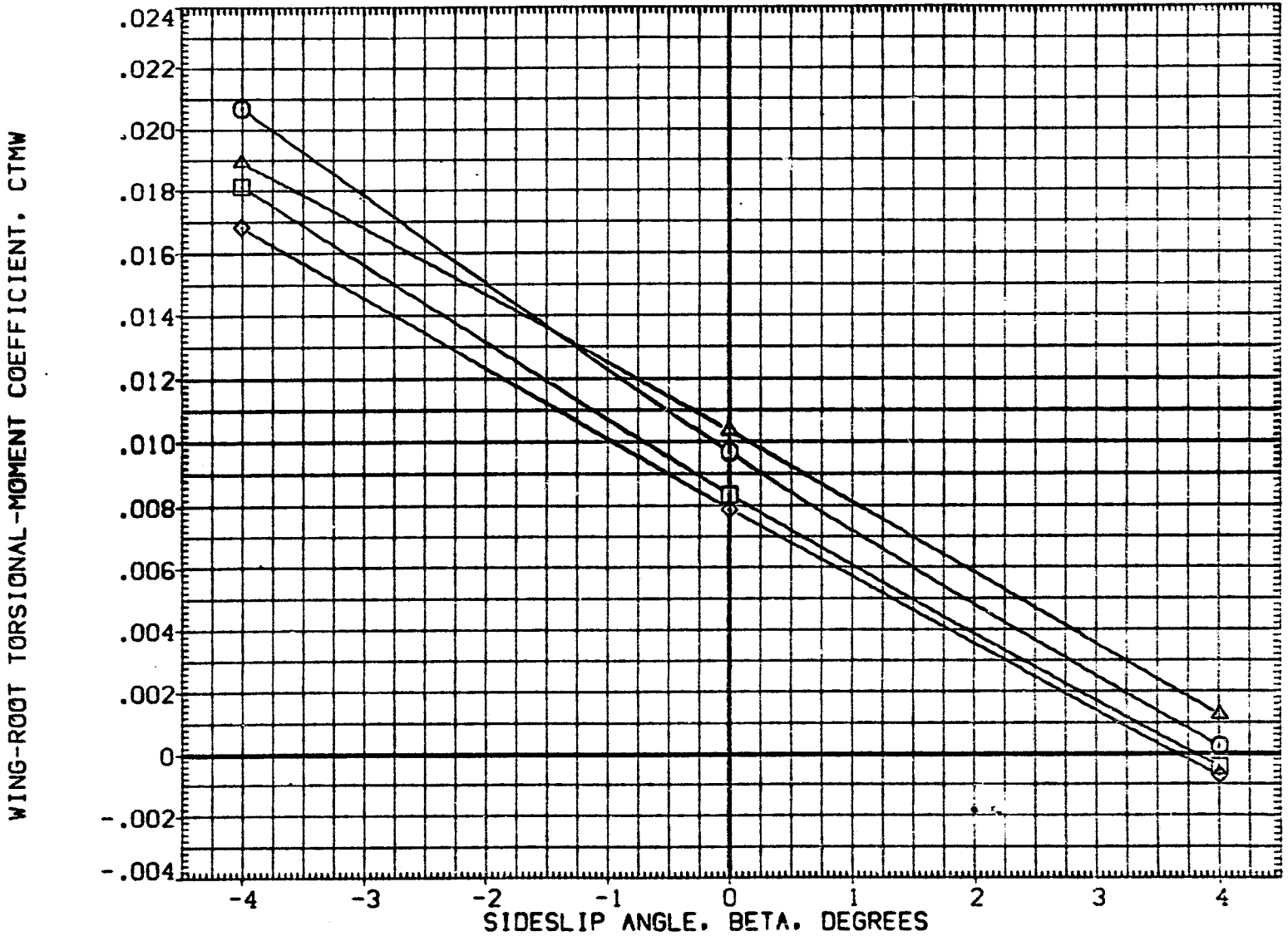



FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y85) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4Y54) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4Y65) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

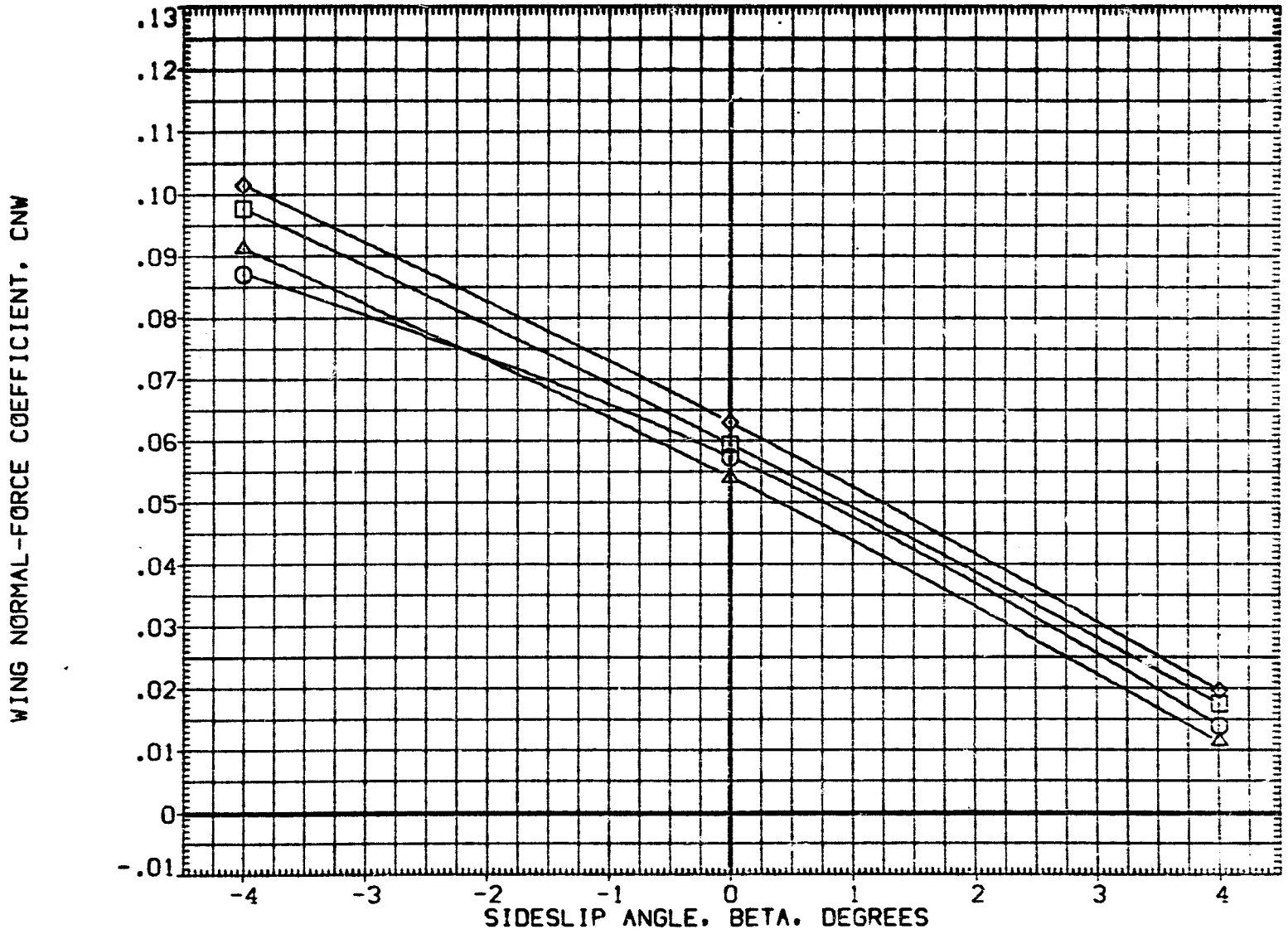



FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YA2) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4Y92) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y76) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

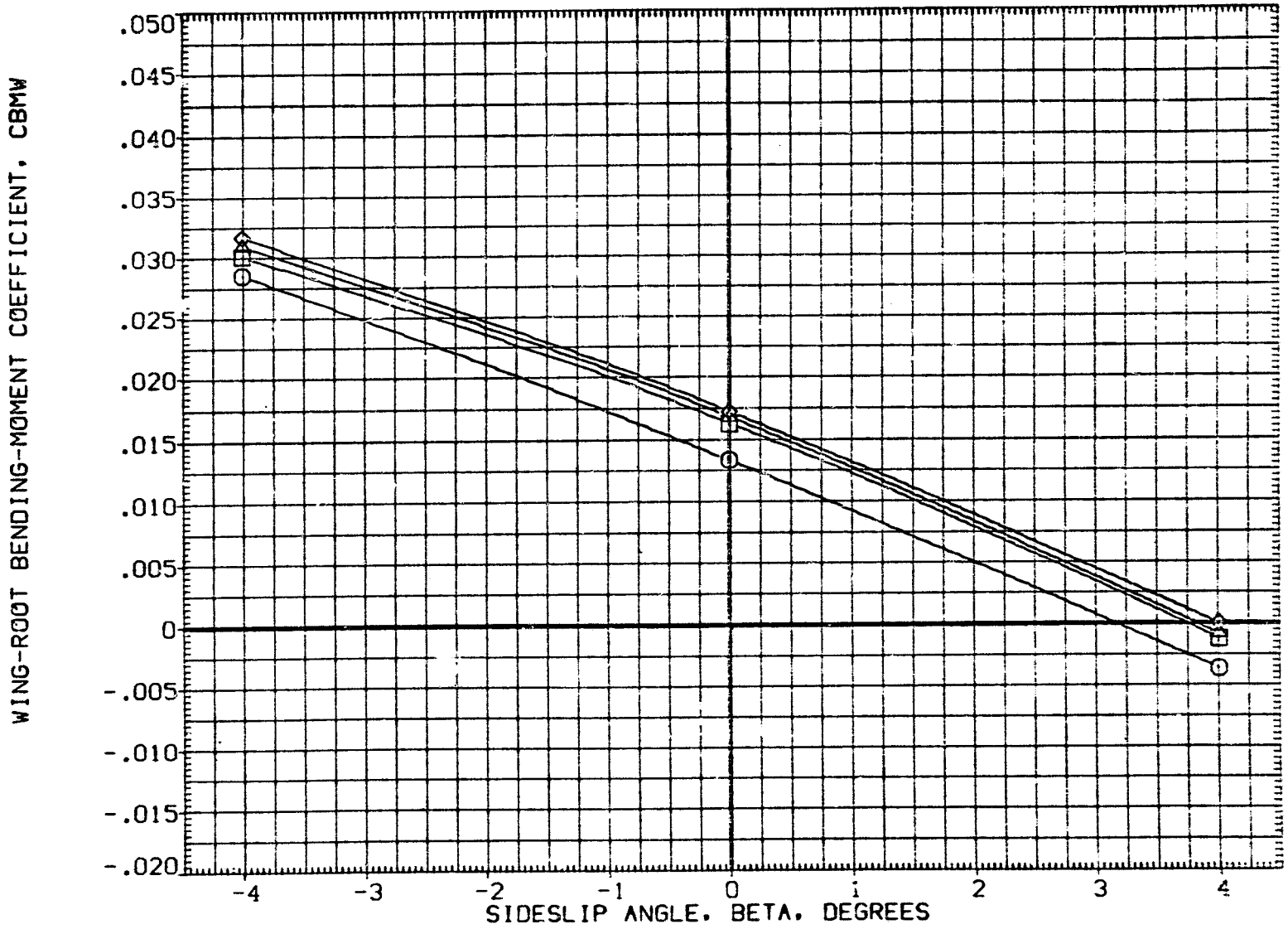



FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YA2) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4Y92) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y76) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

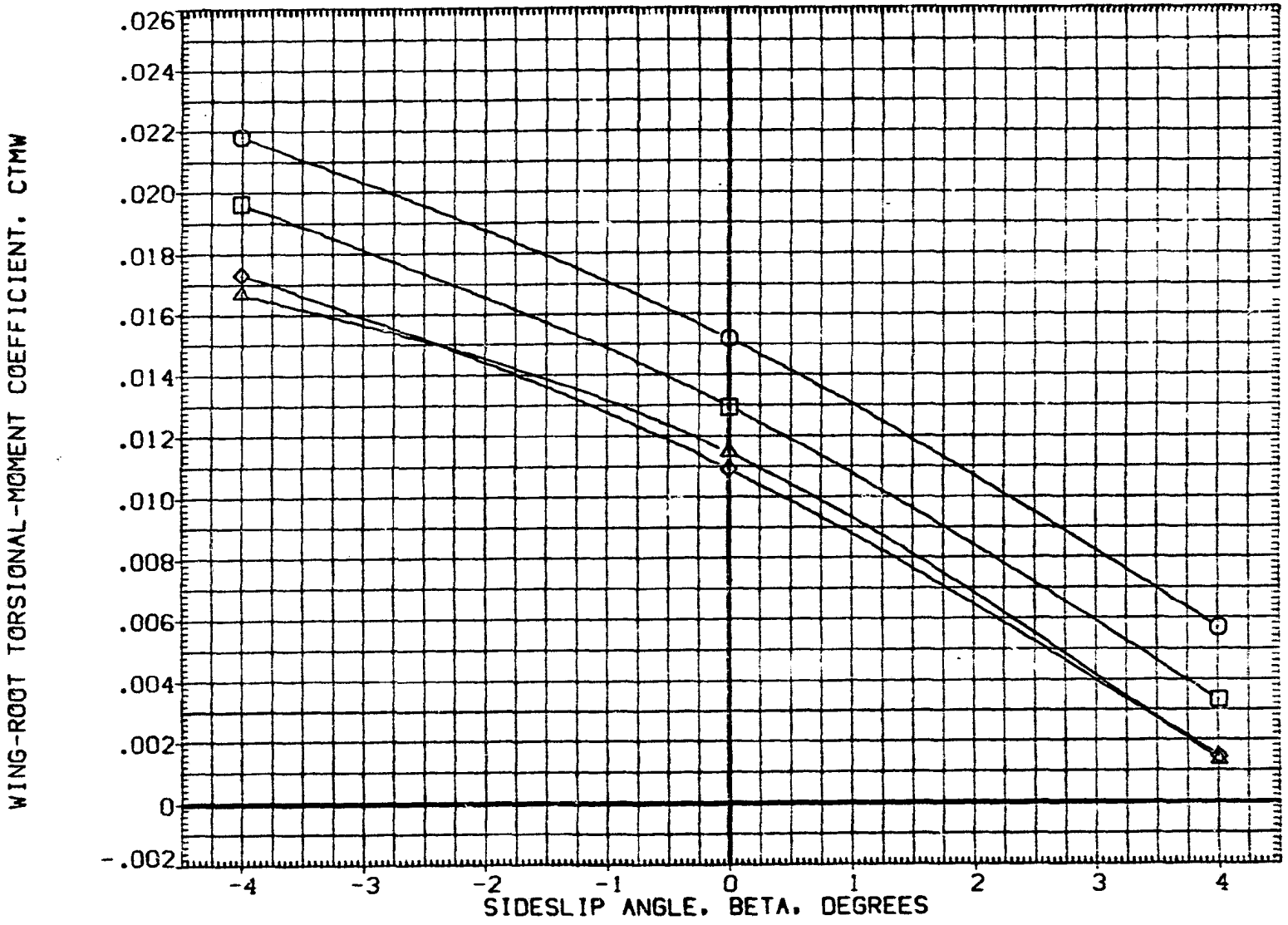



FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YA2) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4Y92) | ⋈ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y76) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.100 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

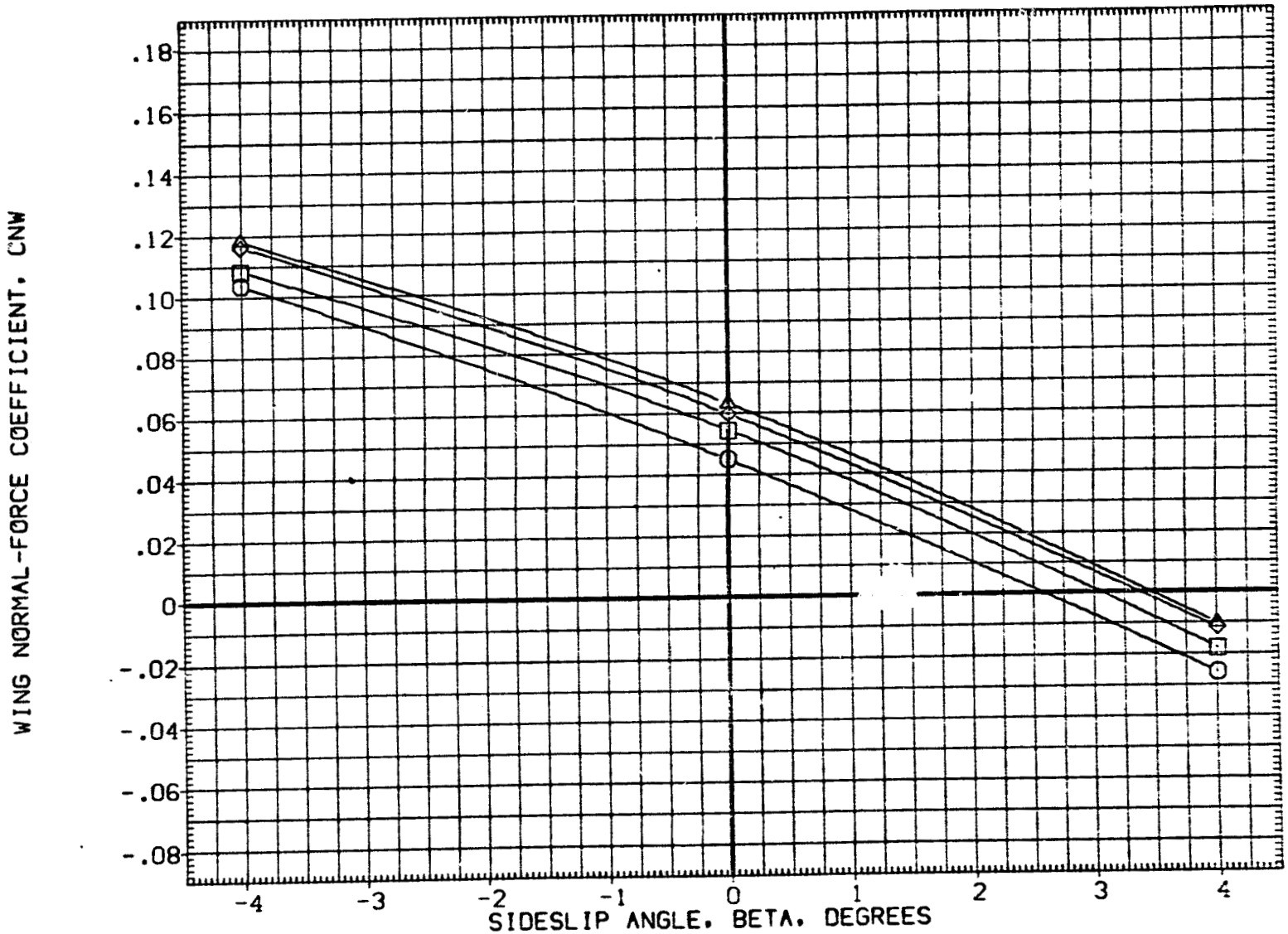



FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y86) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4Y55) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y66) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORM | | |
|---|---|---|
| SREF | 2690.0000 | |
| LREF | 1290.3000 | |
| BREF | 1290.3000 | |
| XMRP | .0000 | |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

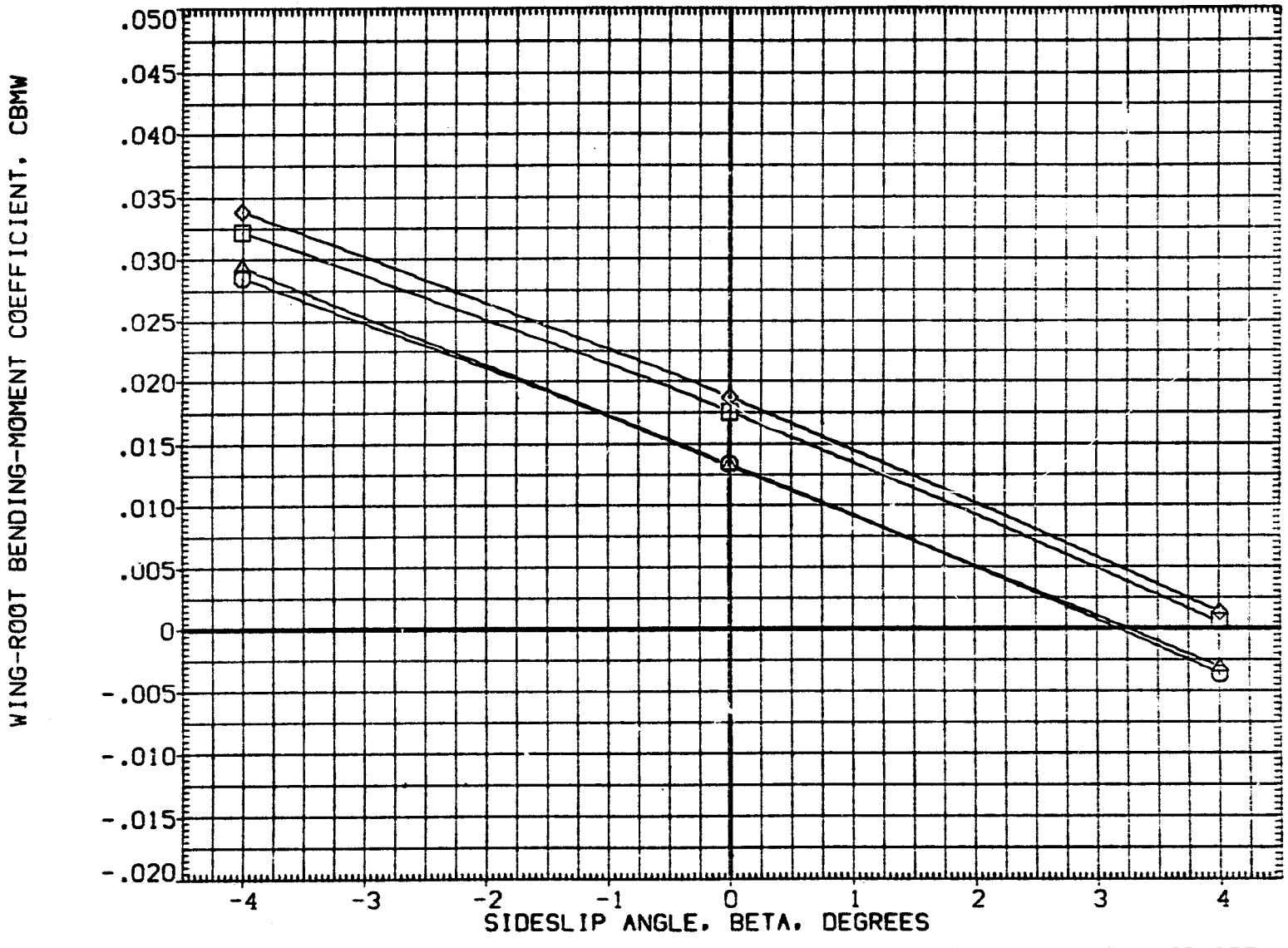



FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y30) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y86) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4Y55) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y66) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

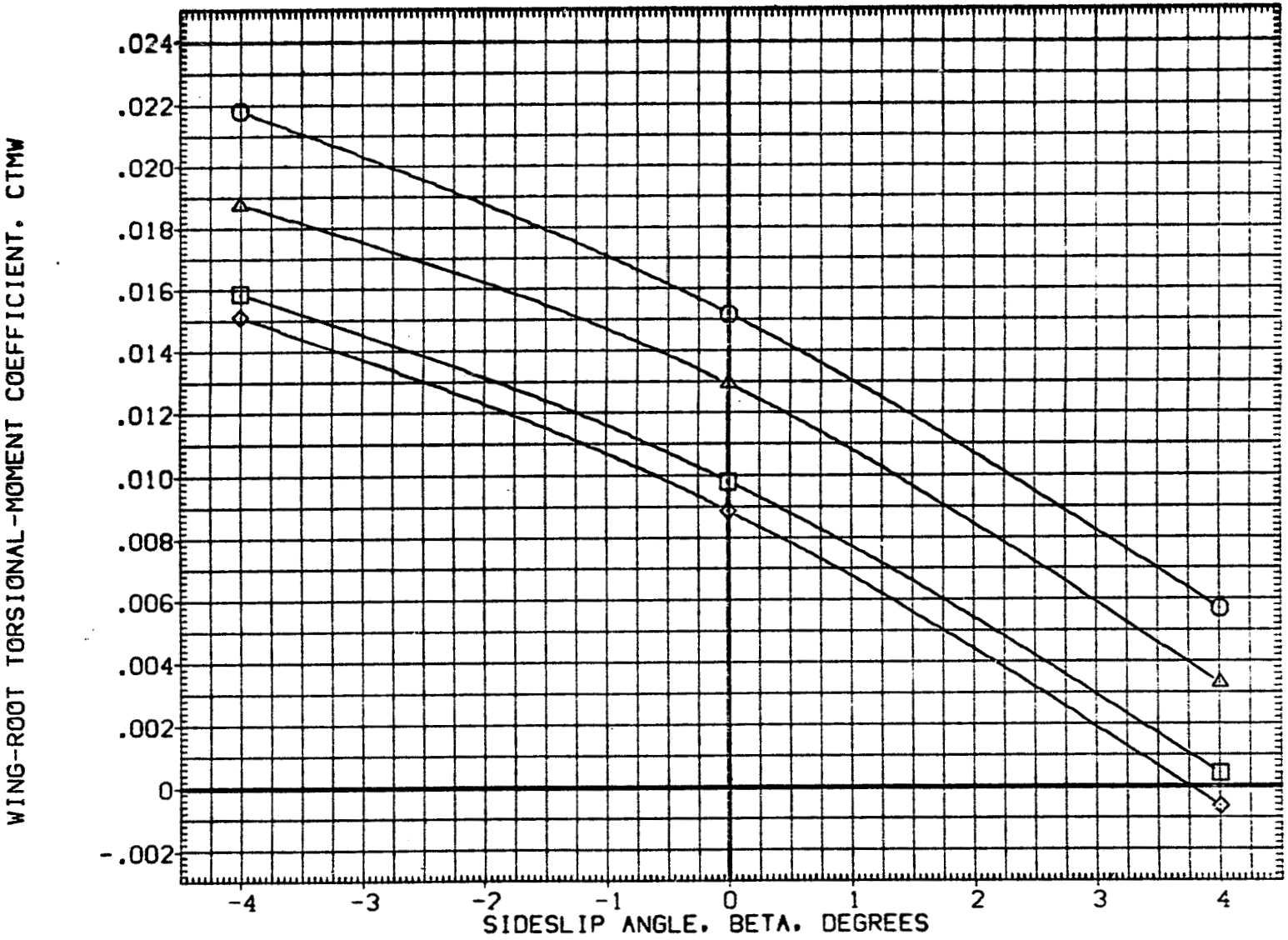



FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y86) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4Y55) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y66) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

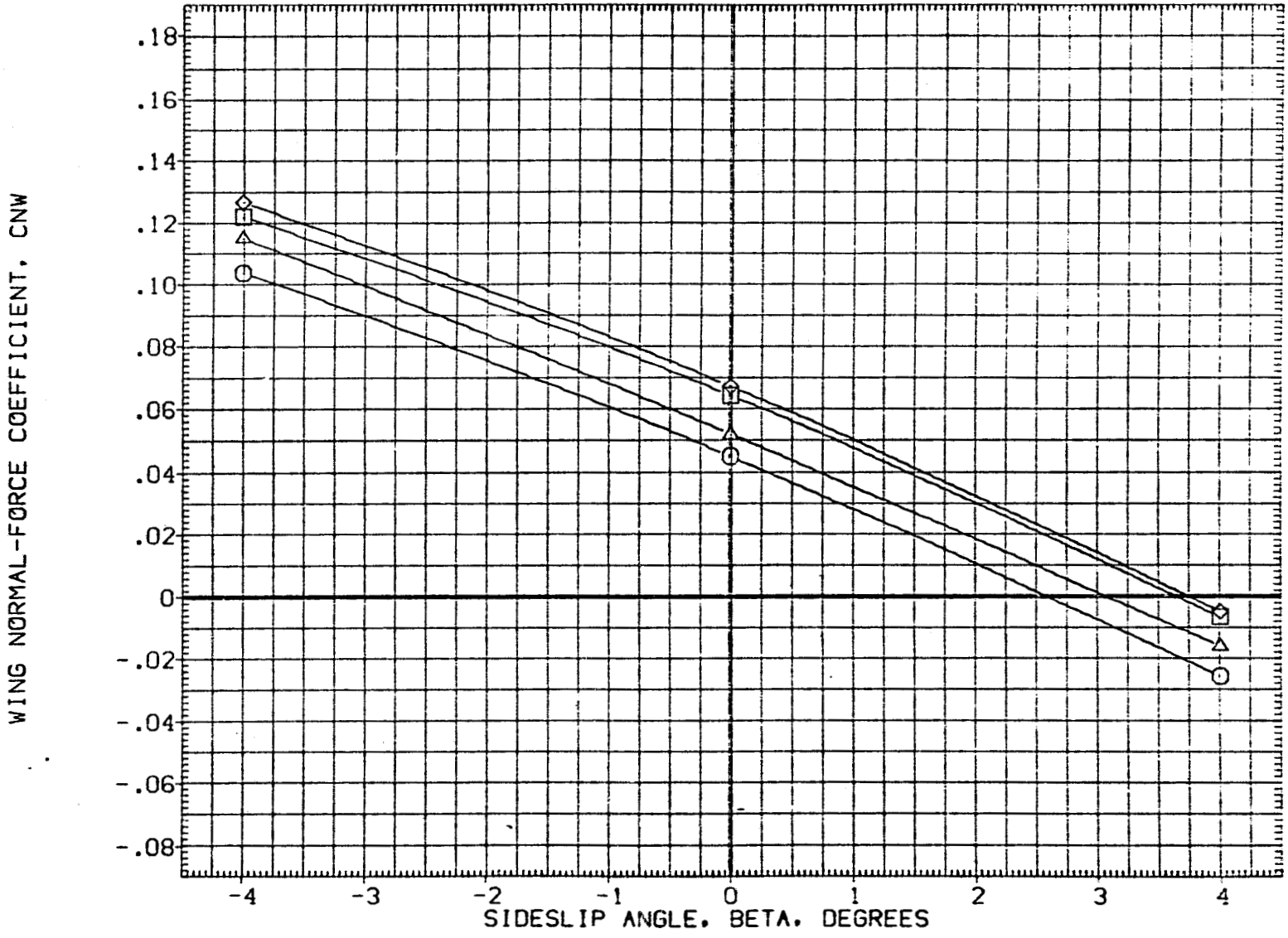



FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YA3) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4Y93) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y77) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

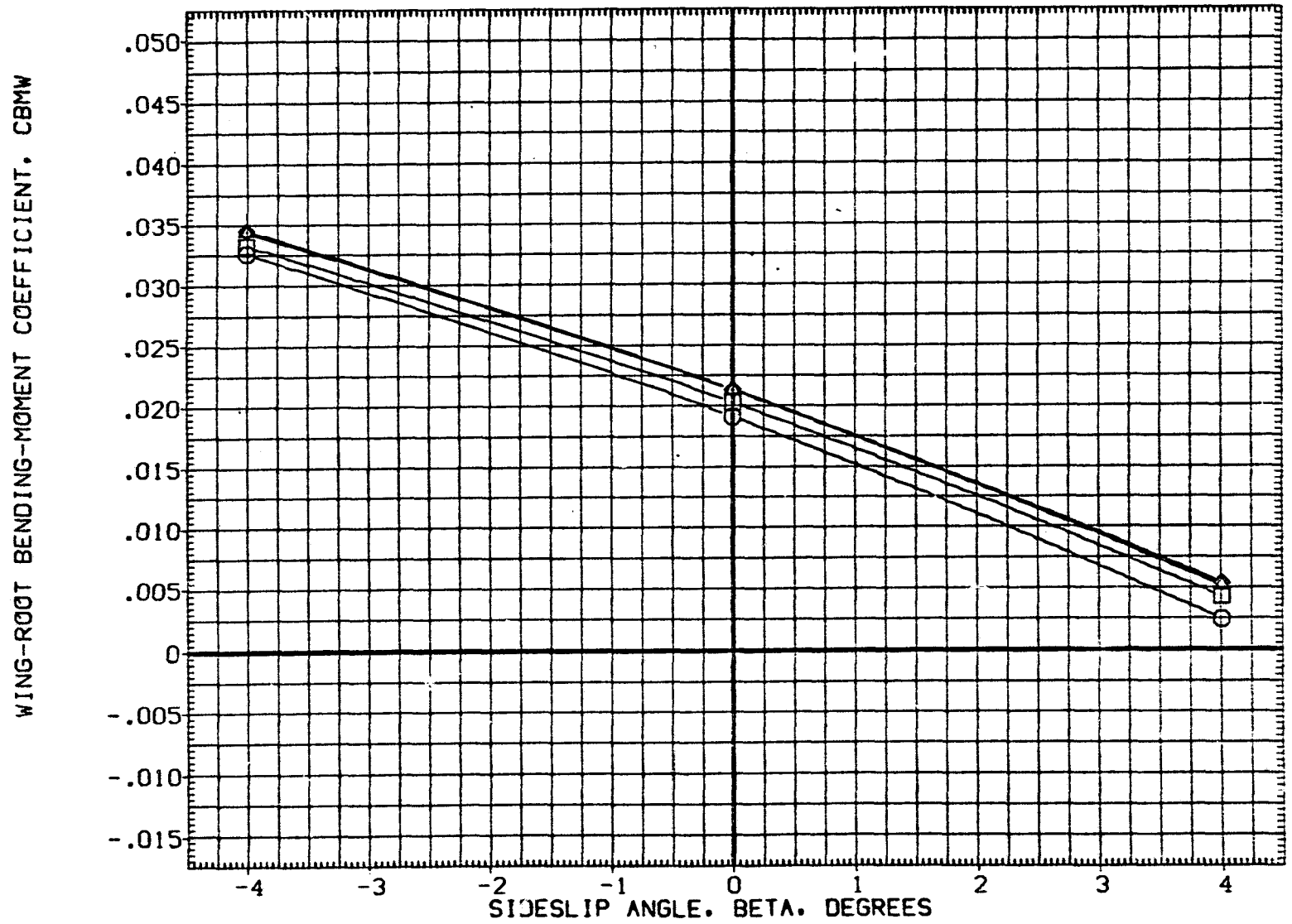



FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YA3) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4Y93) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y77) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

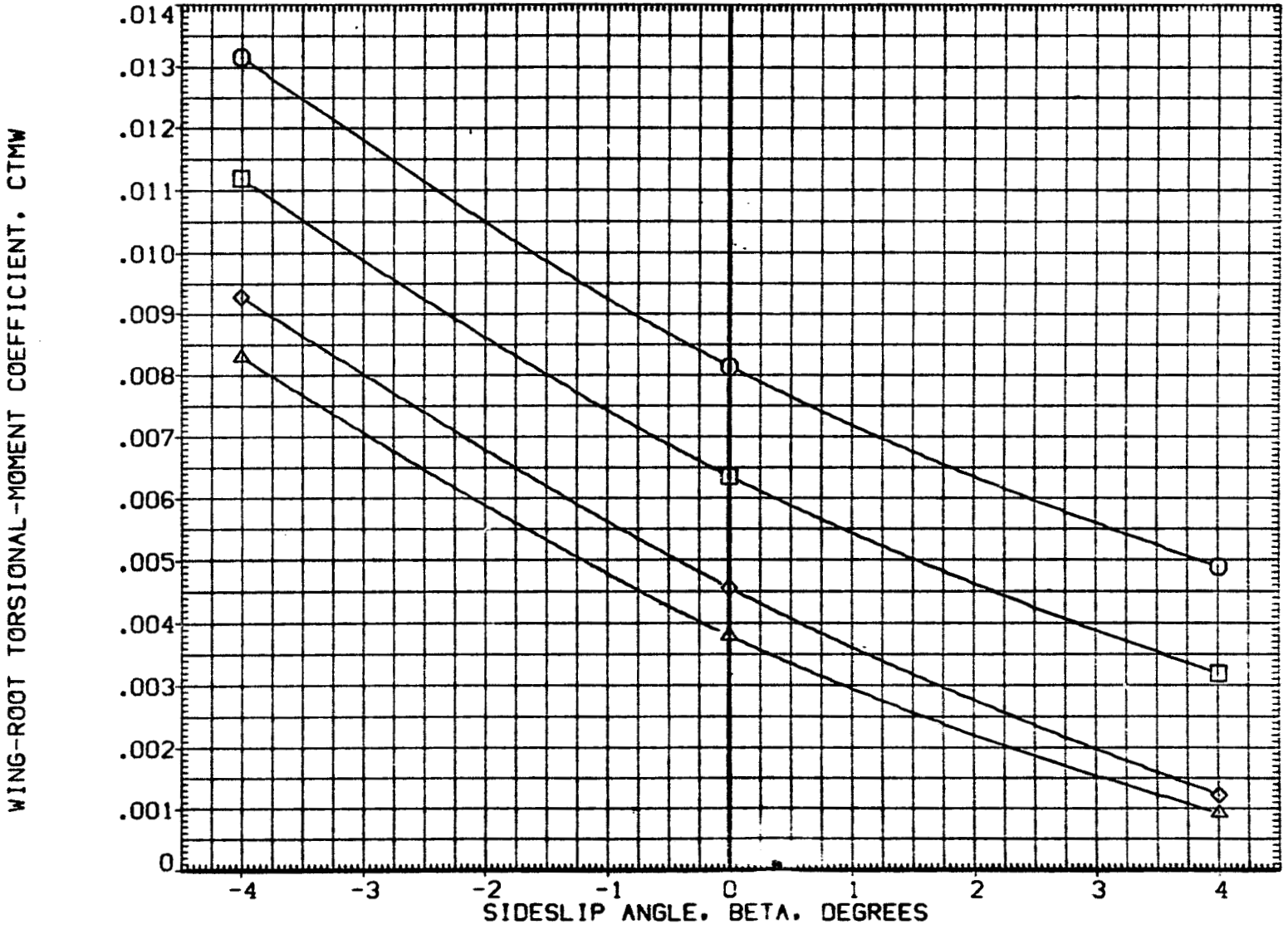



FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y83) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4Y93) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y77) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

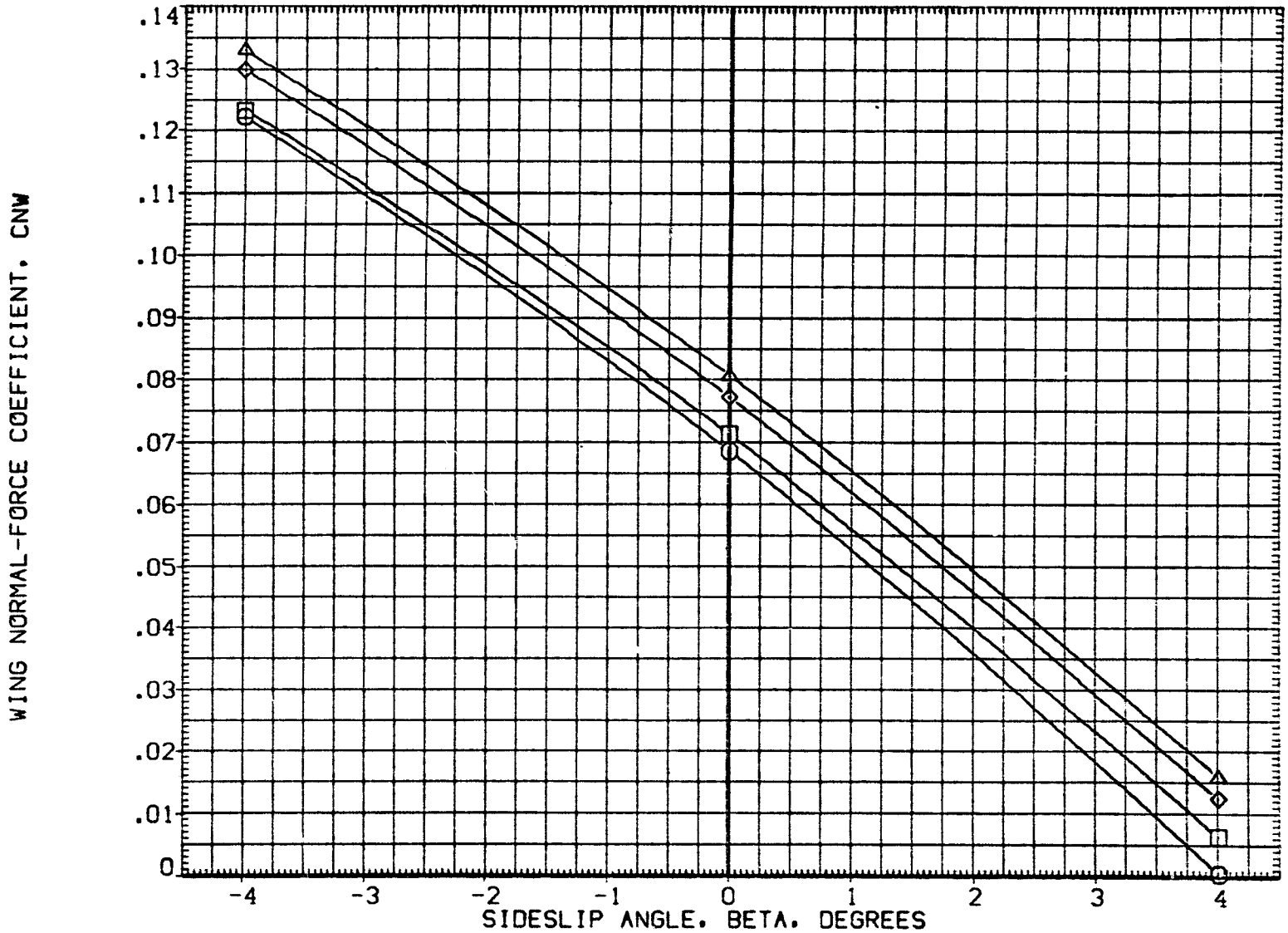



FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y31) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y56) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

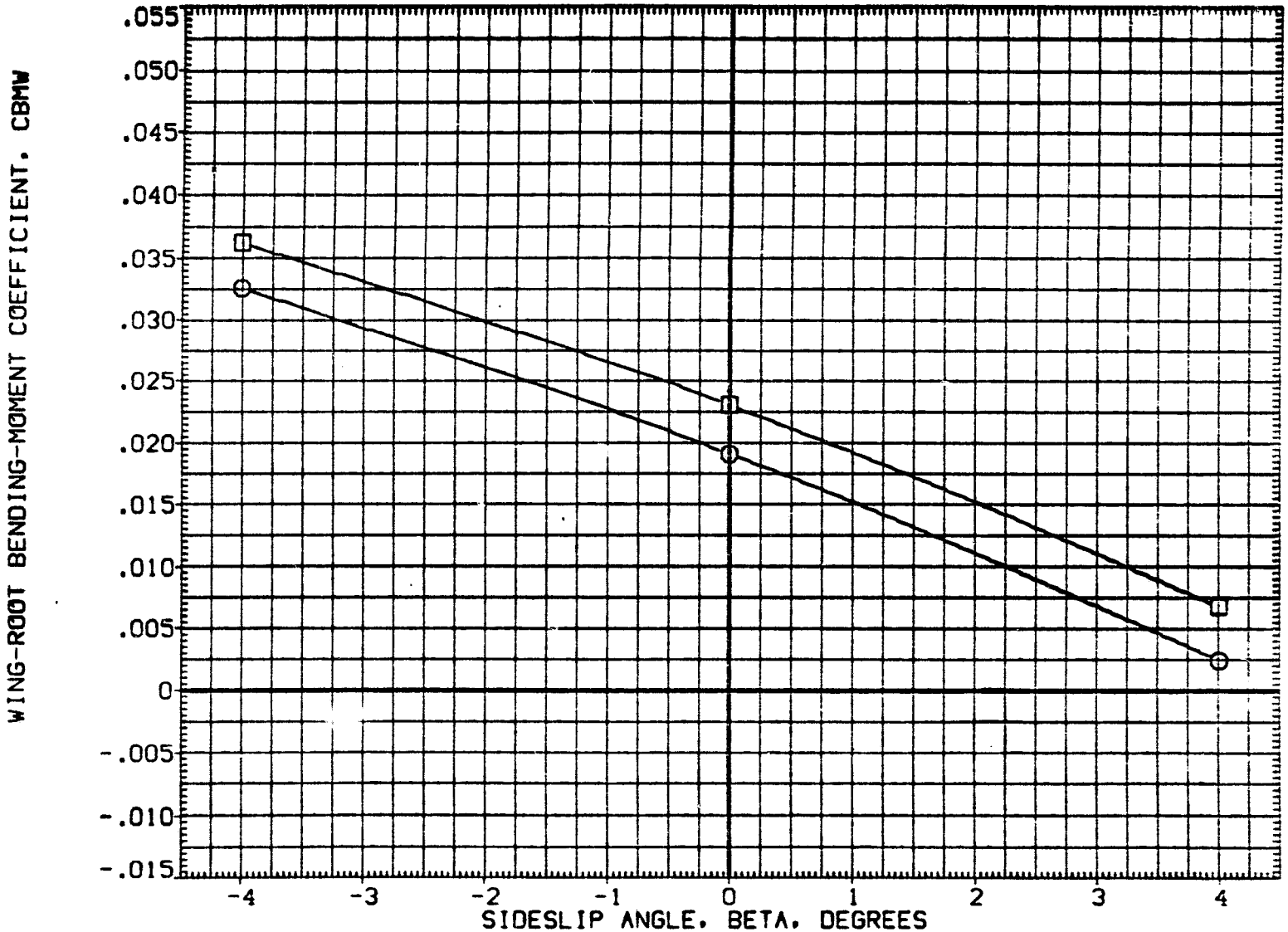



FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y56) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

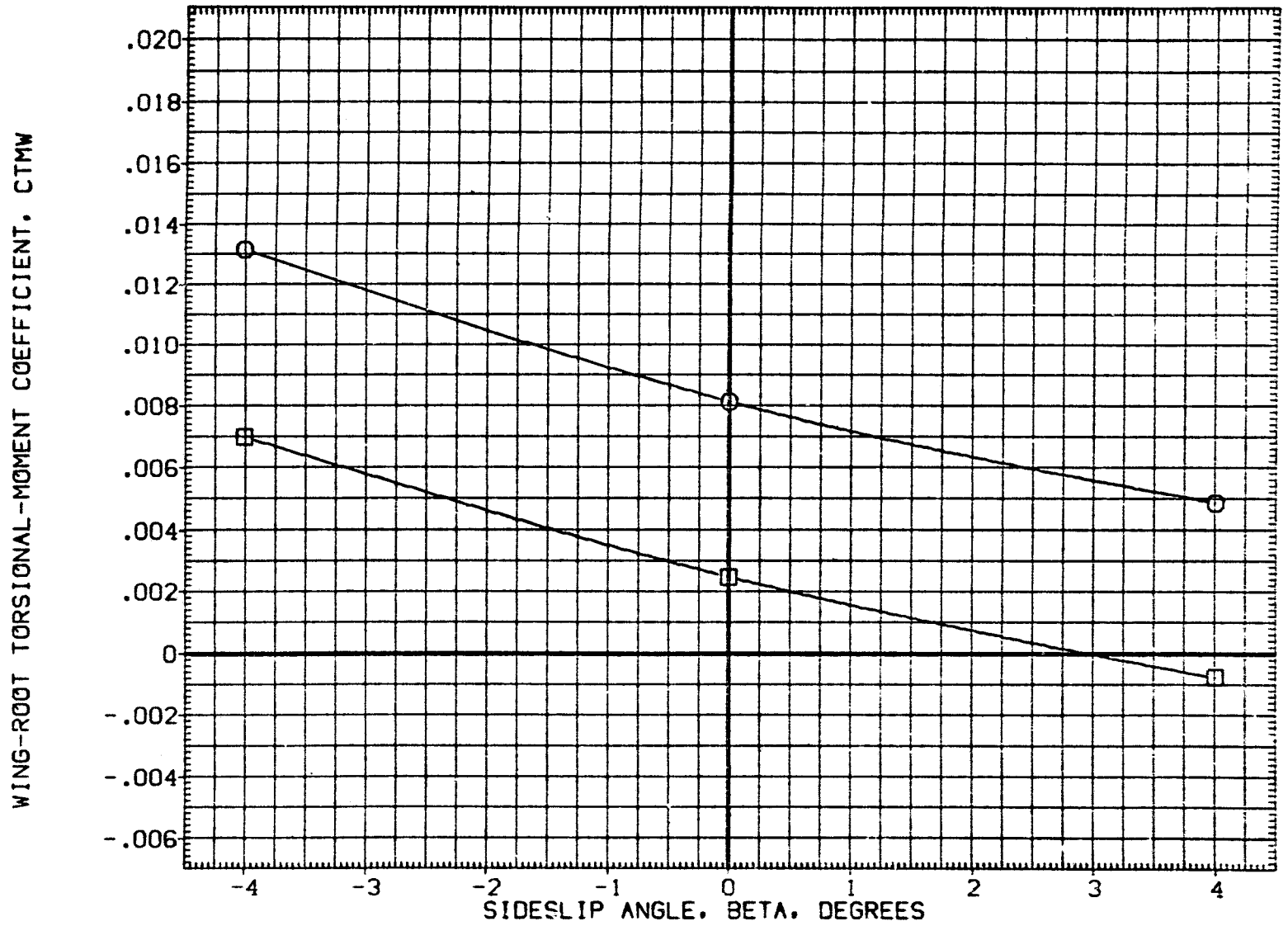



FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y56) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

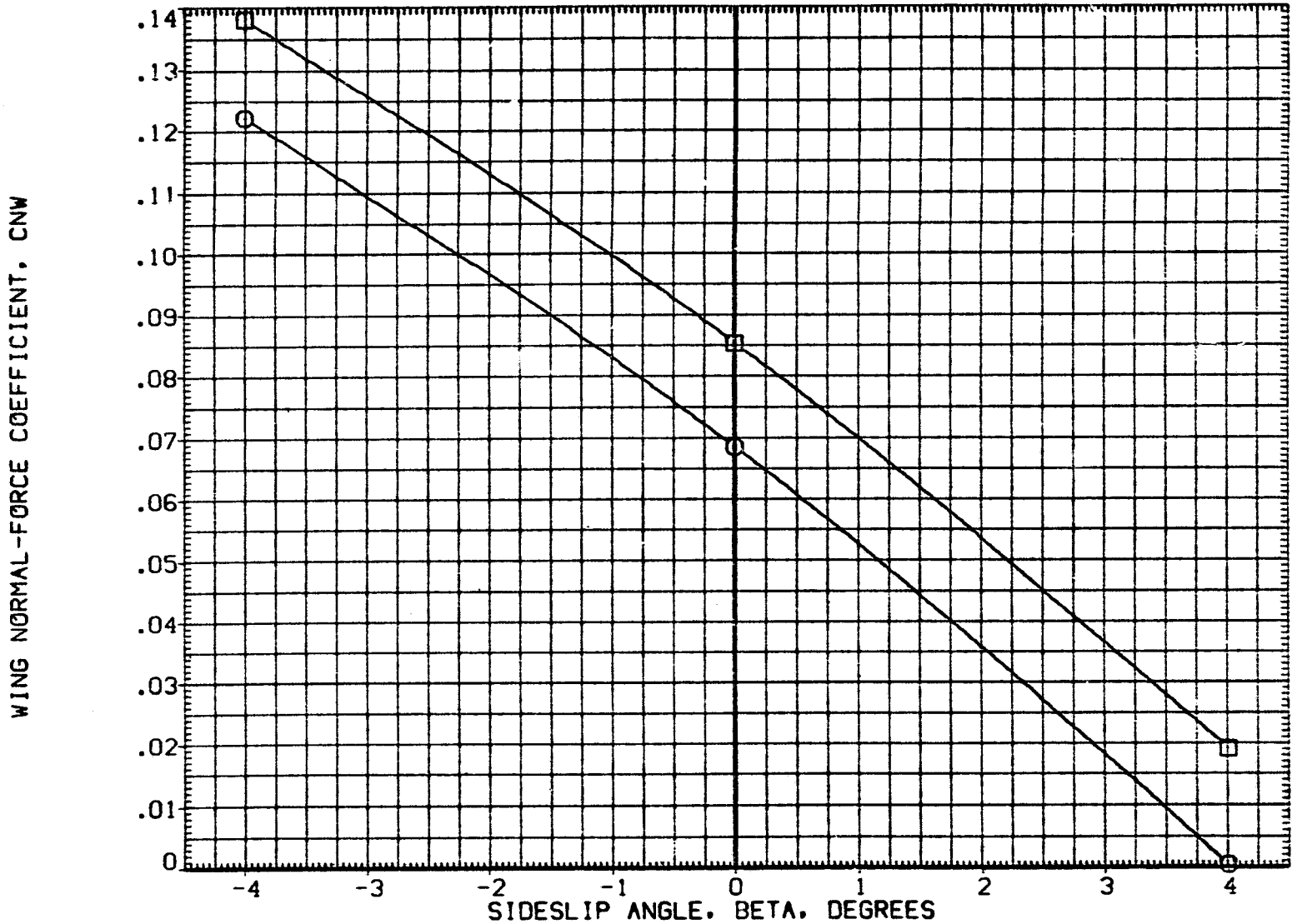



FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YA4) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4Y94) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y78) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

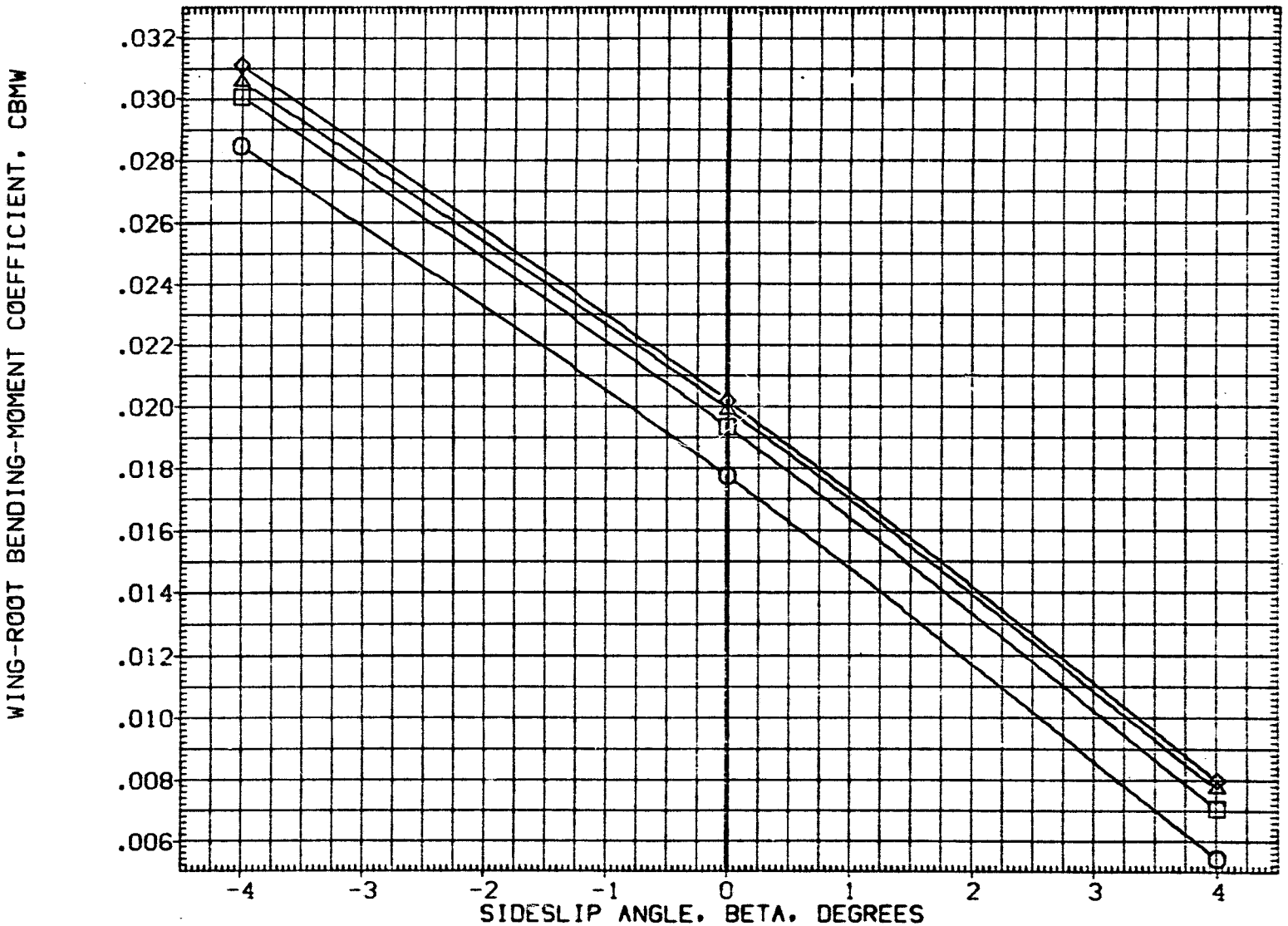



FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y32) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YA4) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4Y94) ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y78) △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

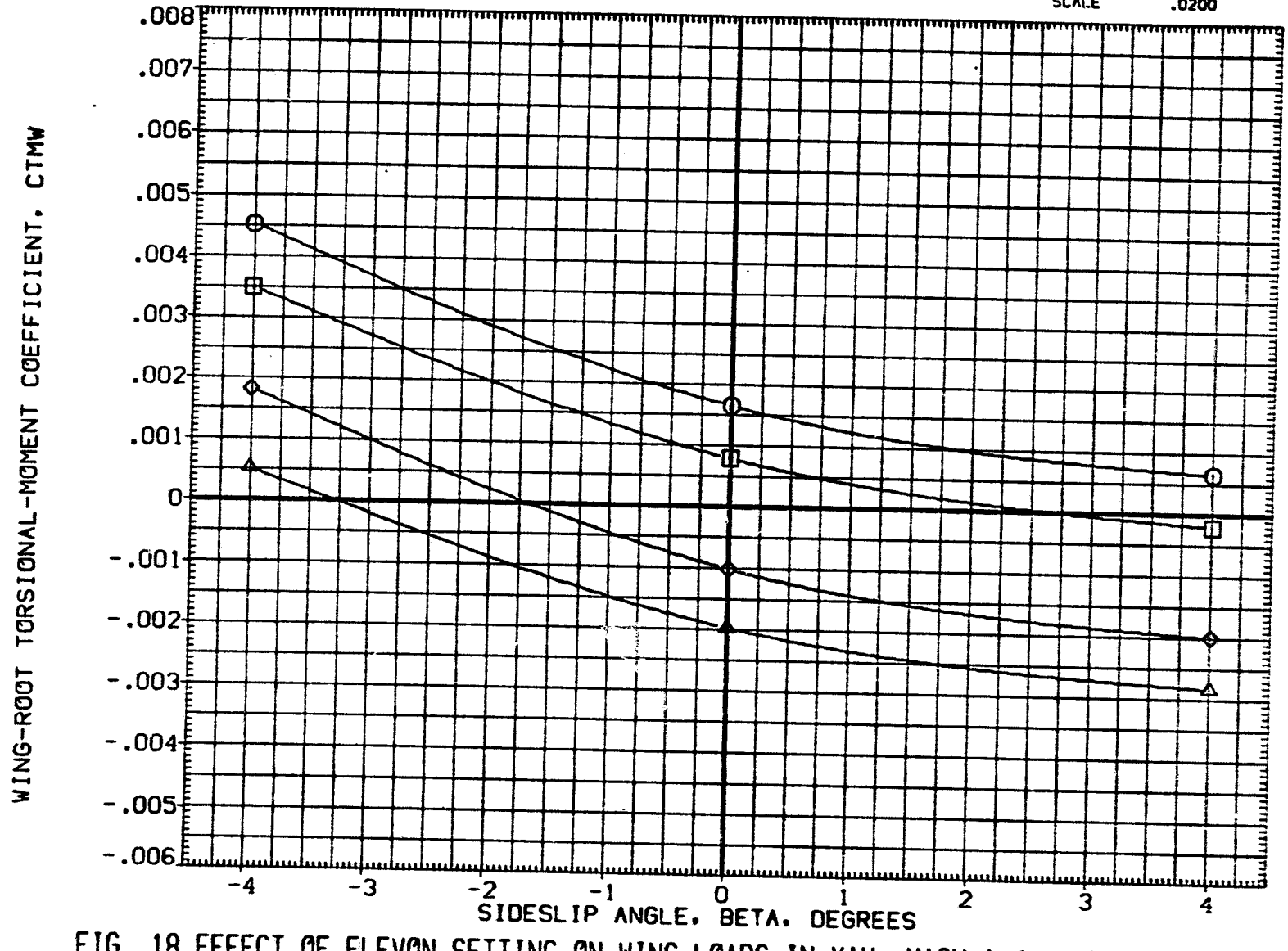



FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YA4) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4Y94) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y78) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

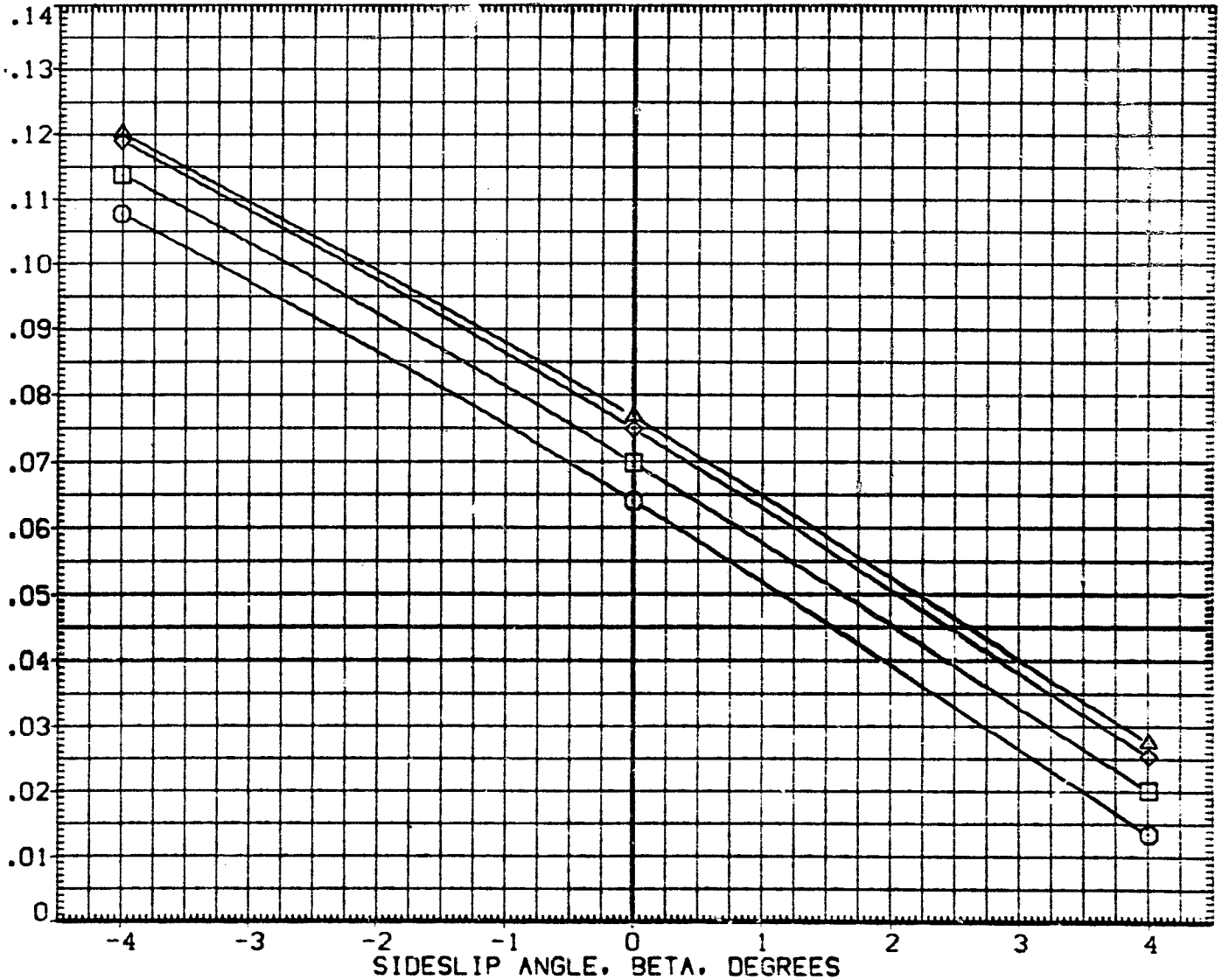



FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y32) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y57) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y68) ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.400 | 4 250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

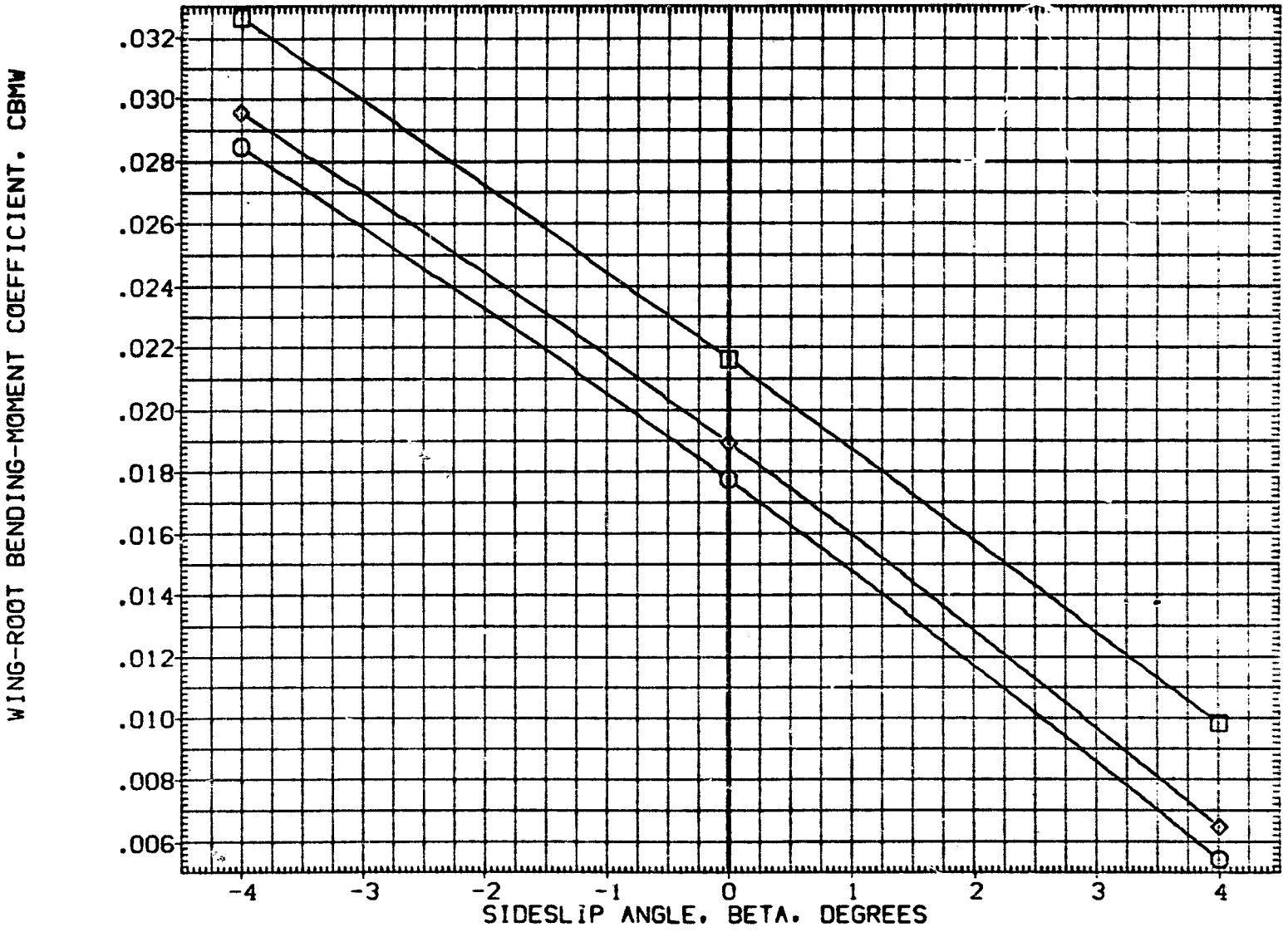



FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y57) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y68) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

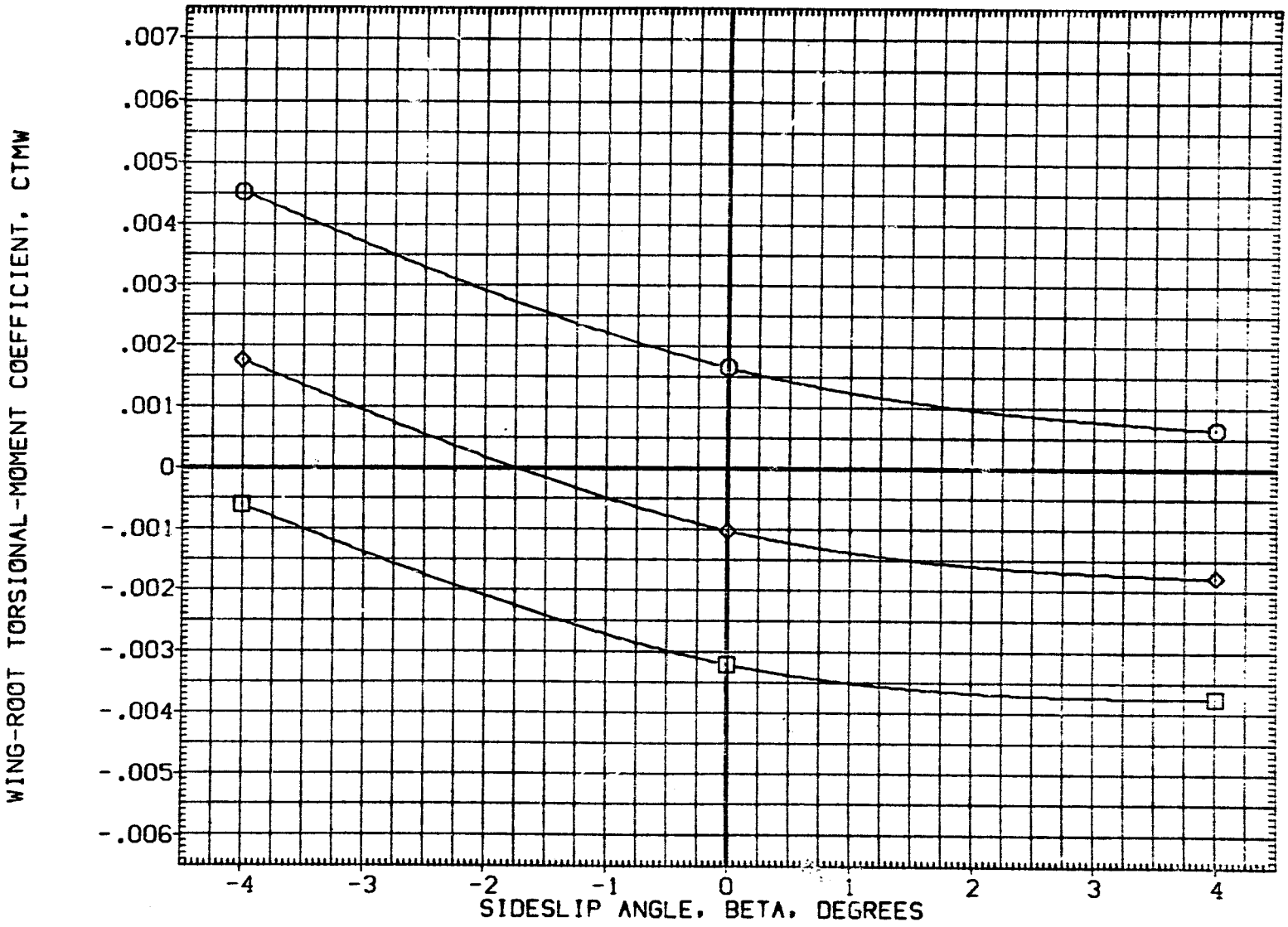



FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y32) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y57) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y68) ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

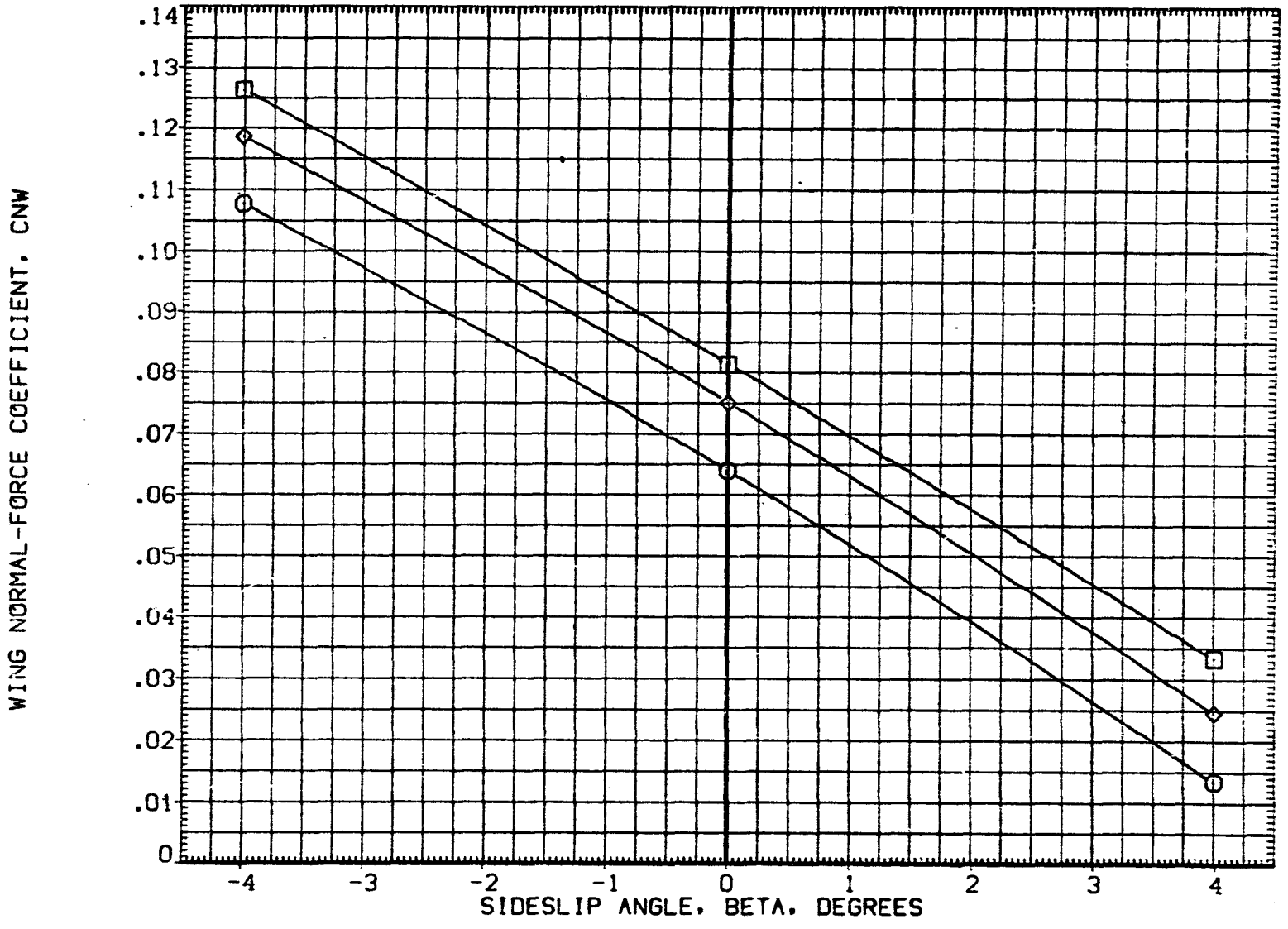



FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4YA0) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .600 | 3.400 |
| (RE4Y90) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4Y74) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

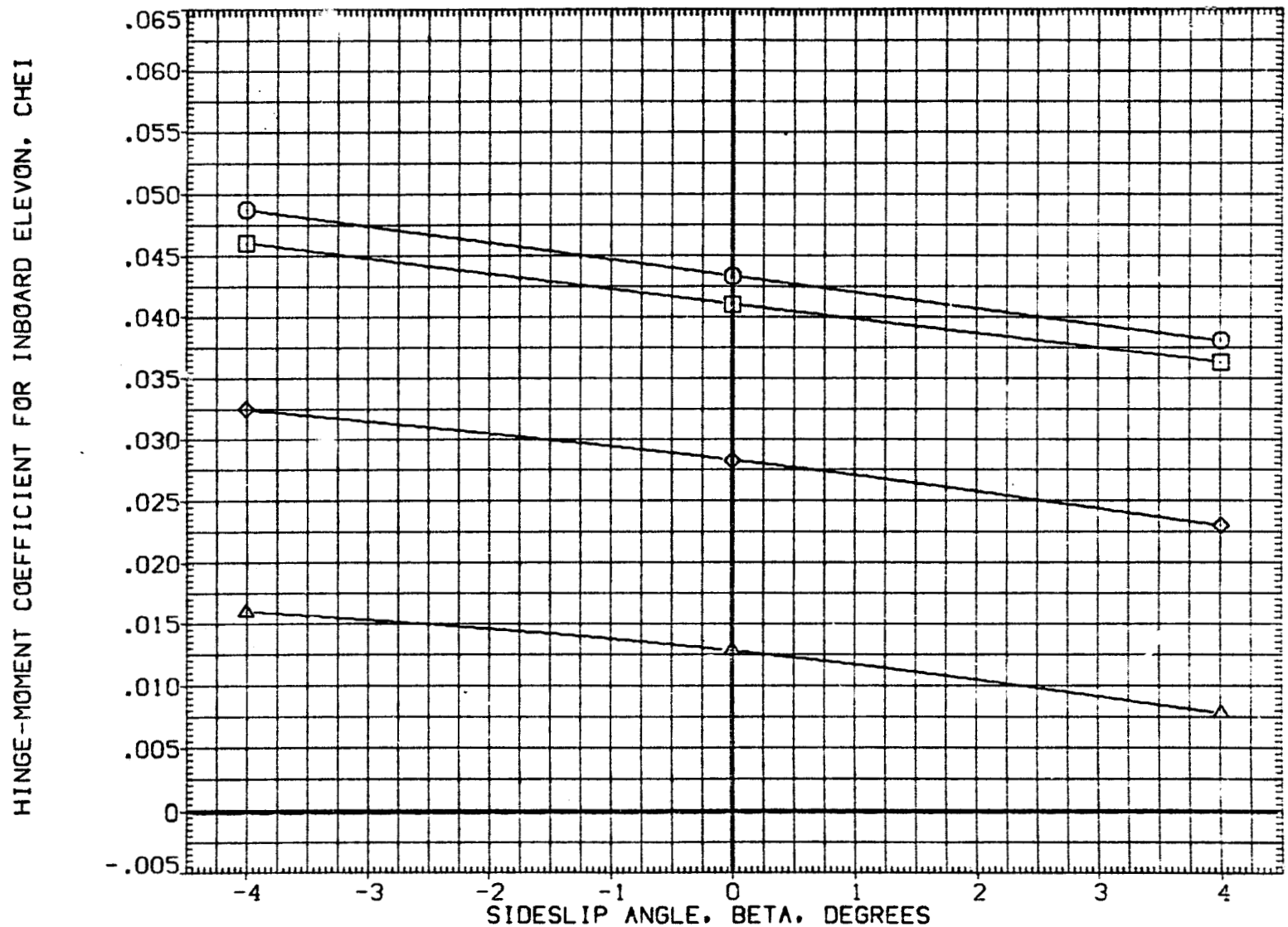



FIG. 19 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.6 PLUME OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4YA0) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .600 | 3.400 |
| (RE4Y90) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4Y74) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

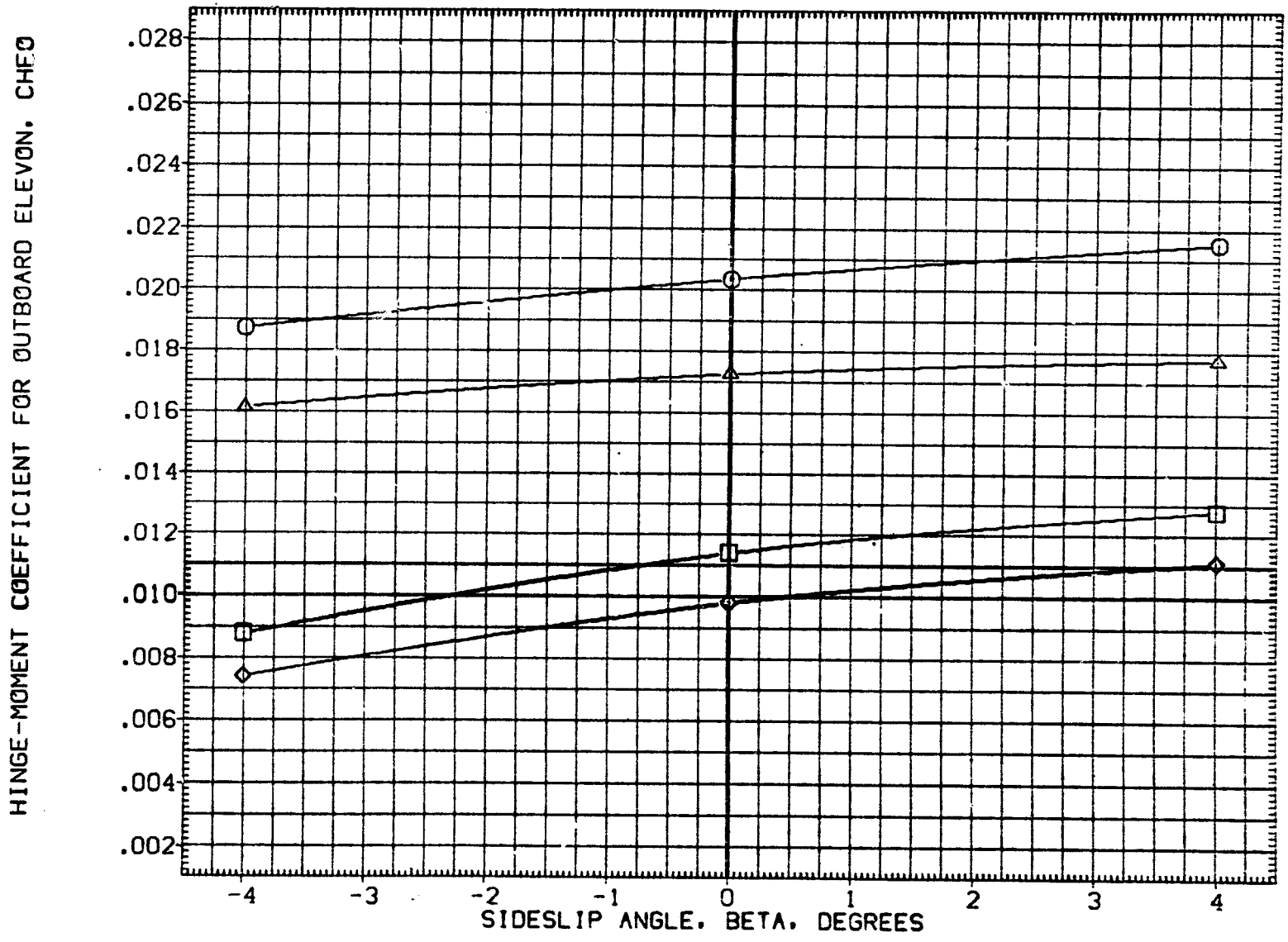



FIG. 19 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.6 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y84) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4Y53) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4Y64) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

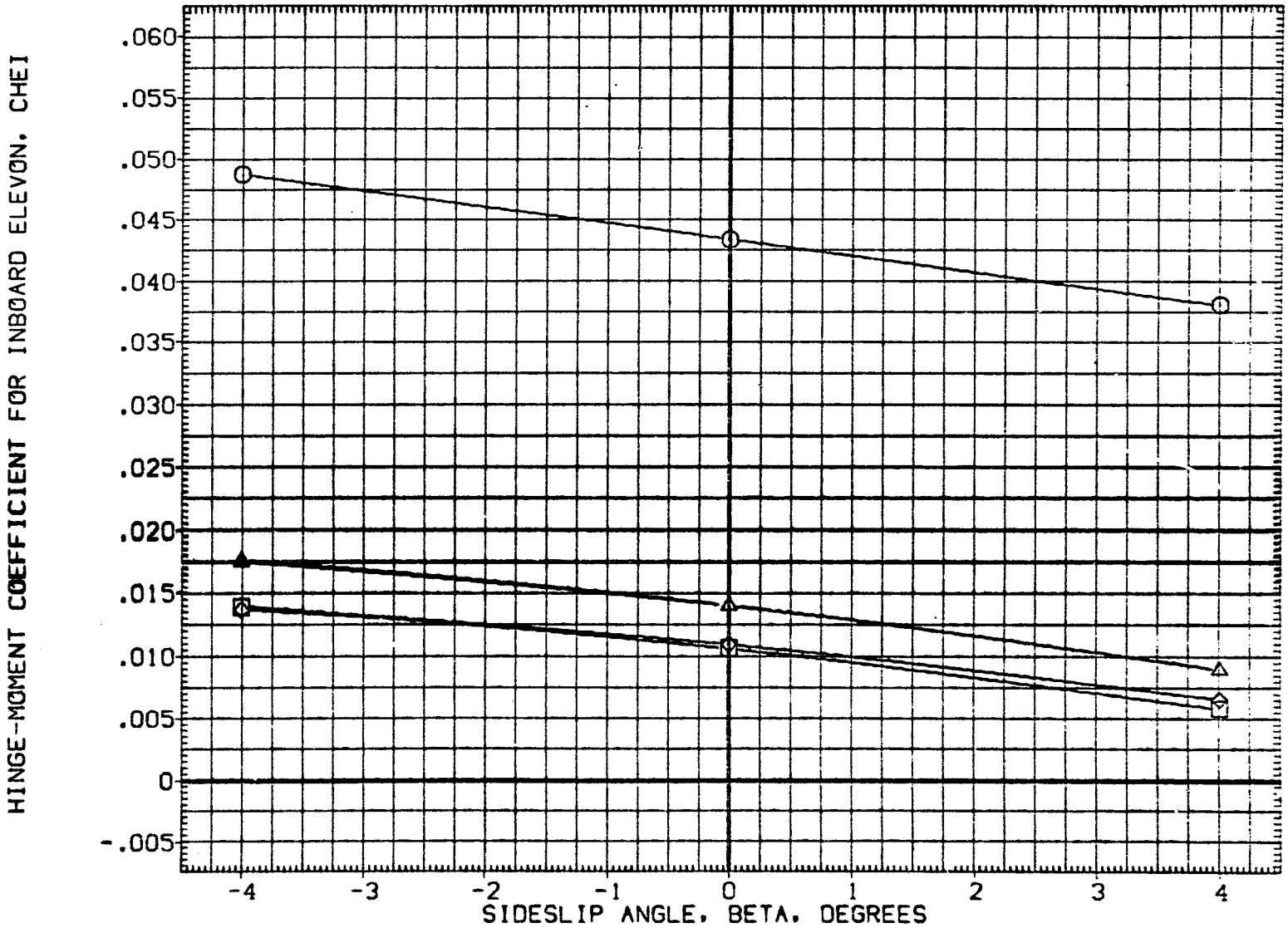



FIG. 19 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.6 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y84) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4Y53) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4Y64) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

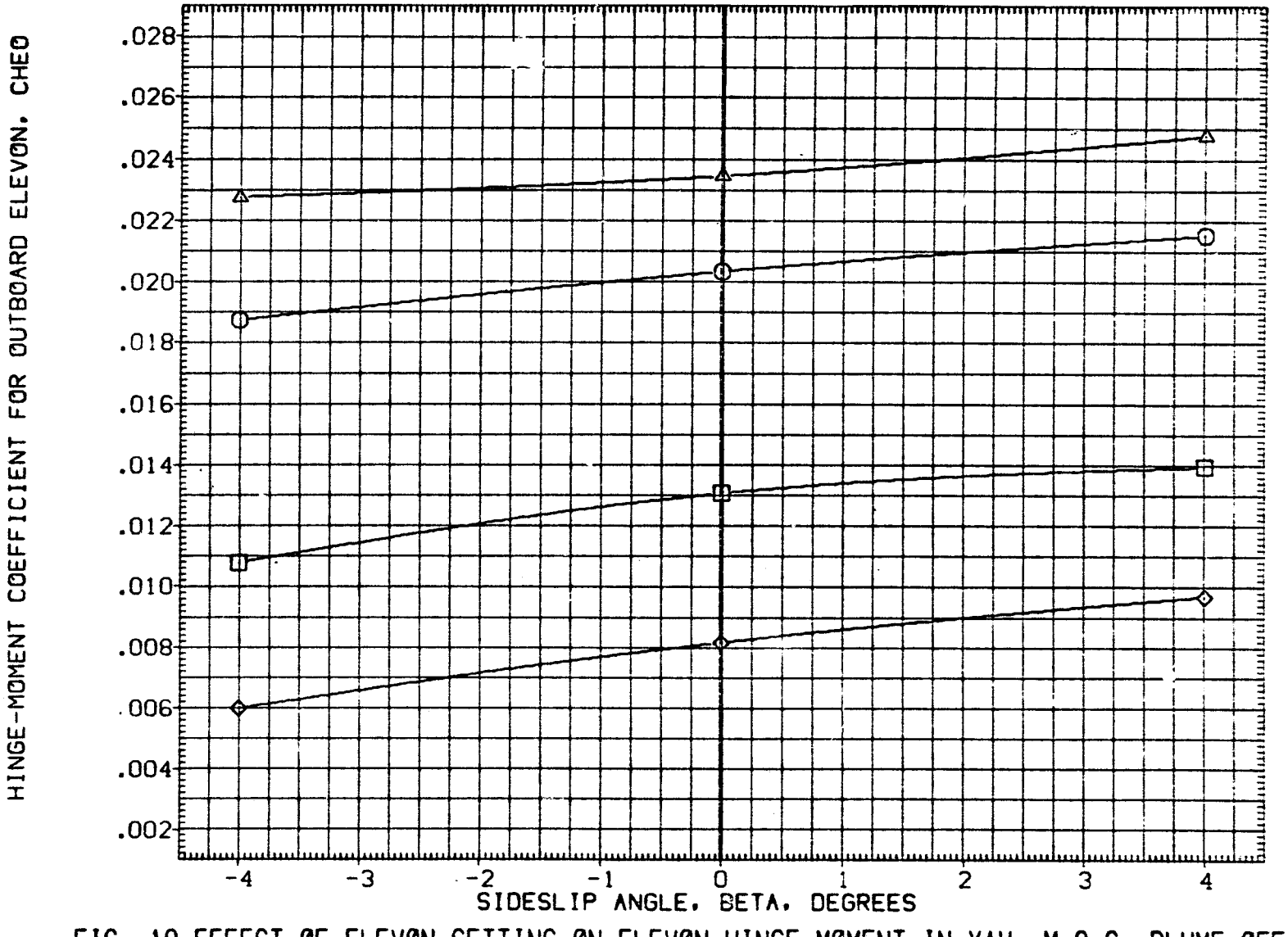



FIG. 19 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.6 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4YA1) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .900 | 4.250 |
| (RE4Y91) | ⋈ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4Y75) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

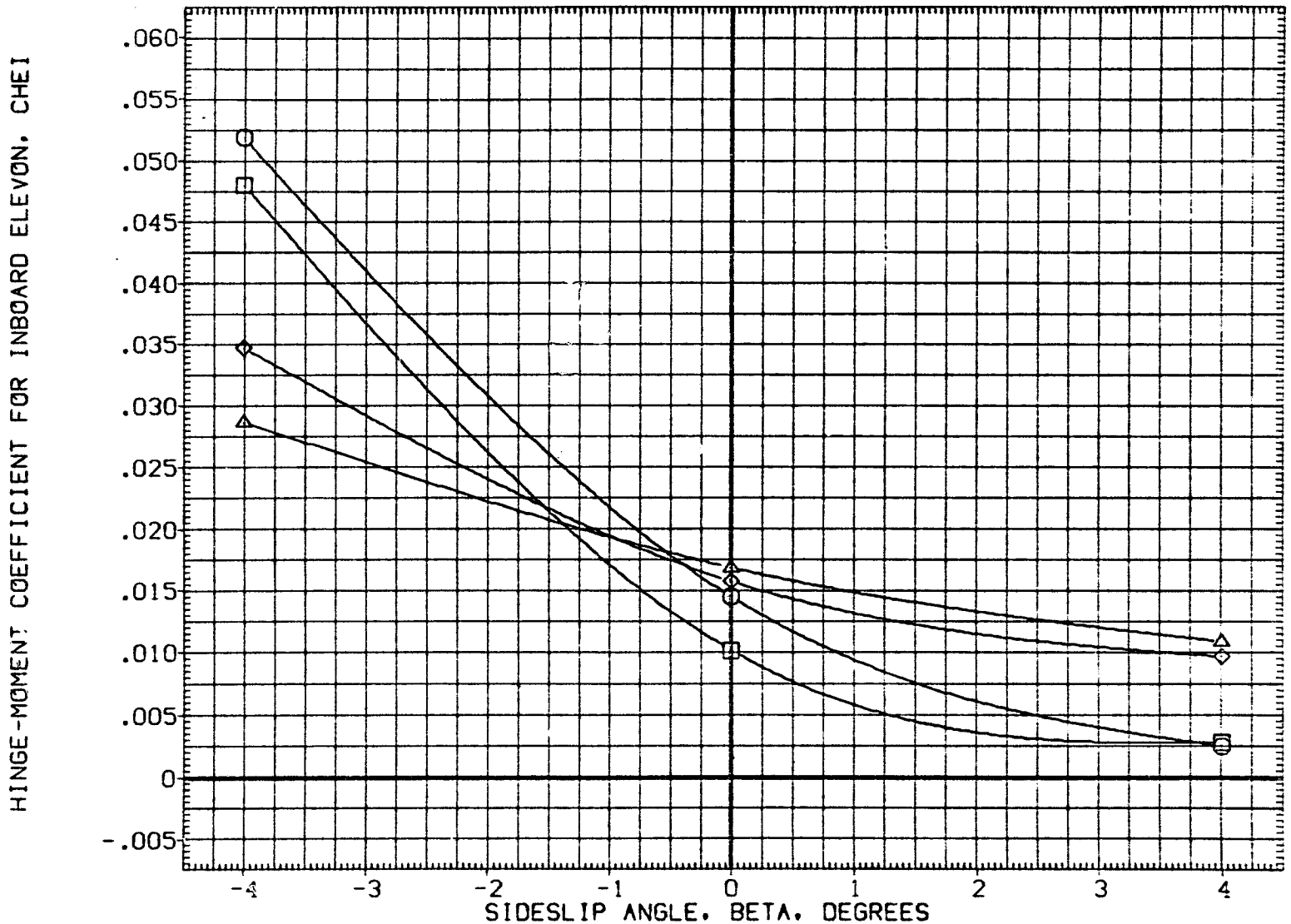



FIG. 20 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.9 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4YA1) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .900 | 4.250 |
| (RE4Y91) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4Y75) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

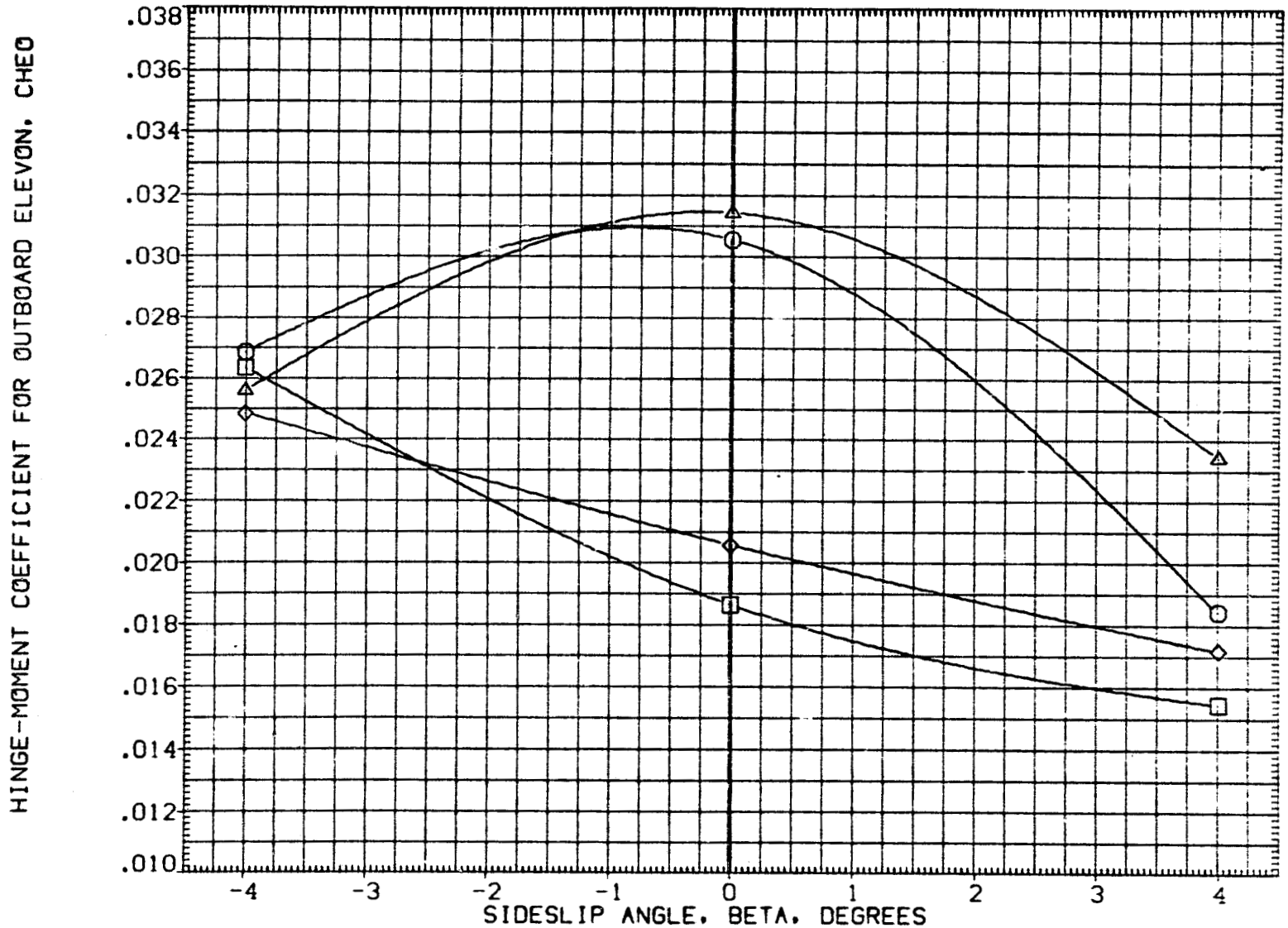



FIG. 20 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.9 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y85) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4Y54) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4Y65) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

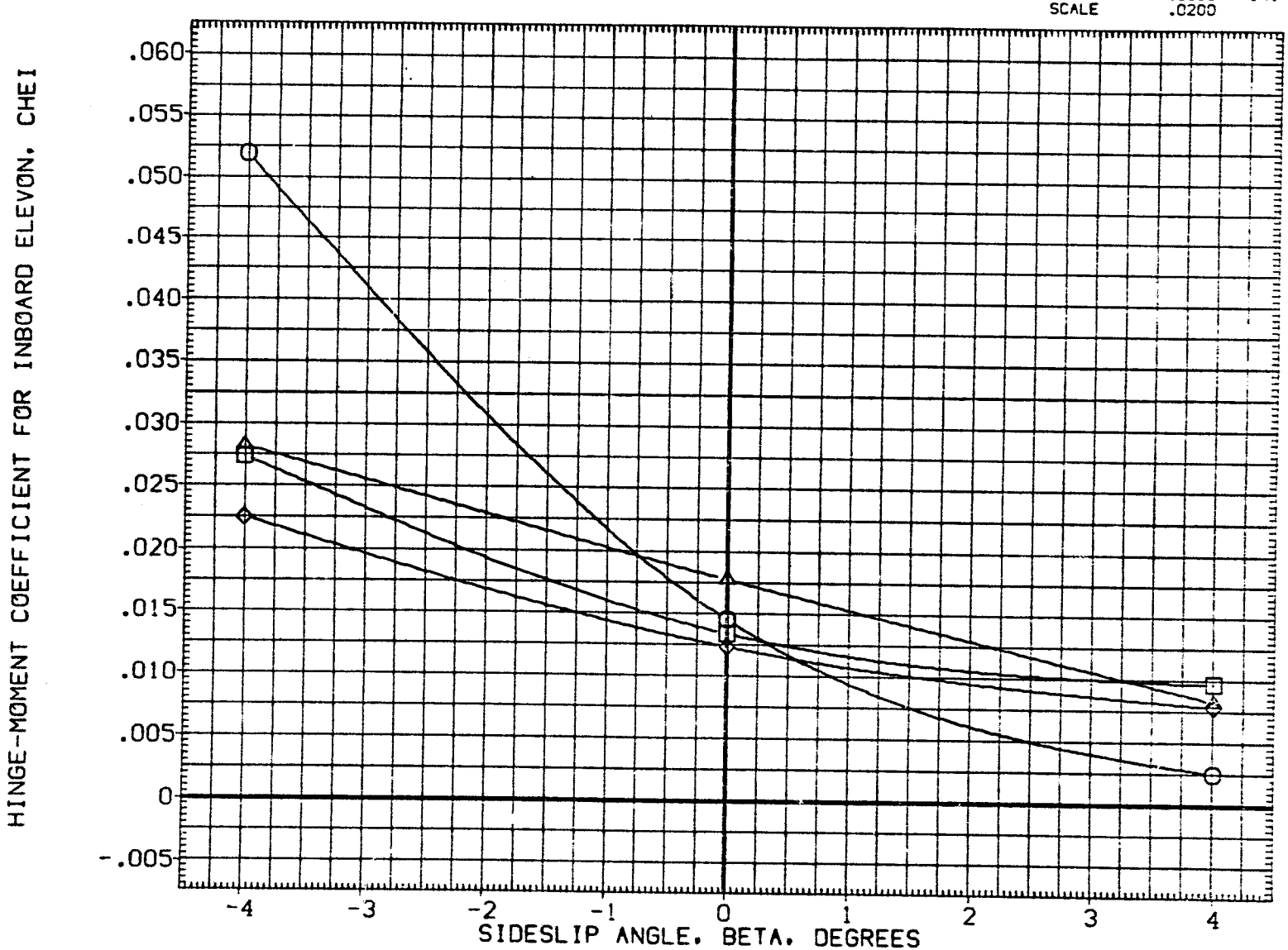



FIG. 20 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.9 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y85) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4Y54) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4Y65) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

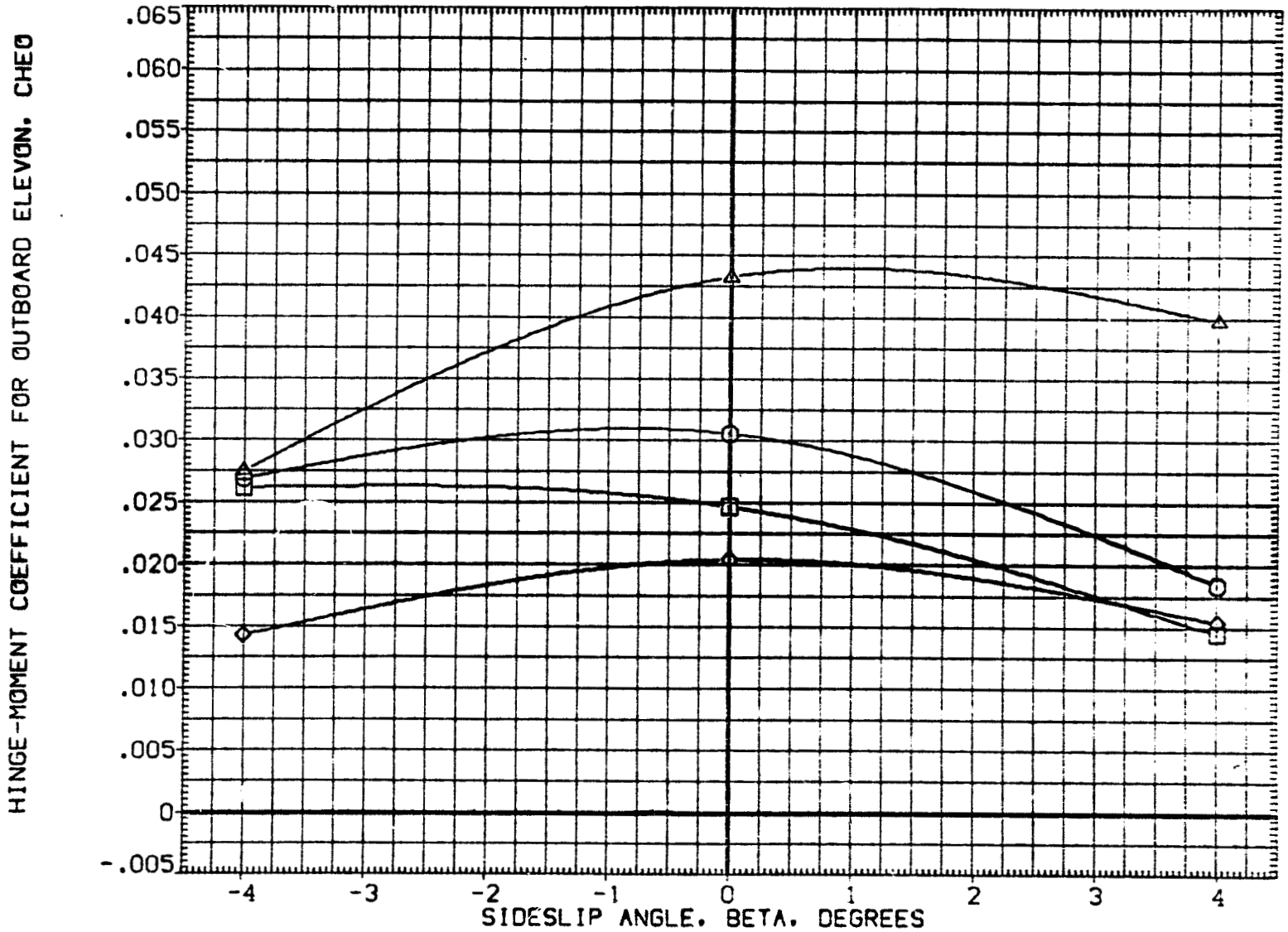



FIG. 20 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.9 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YA2) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4Y92) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y76) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

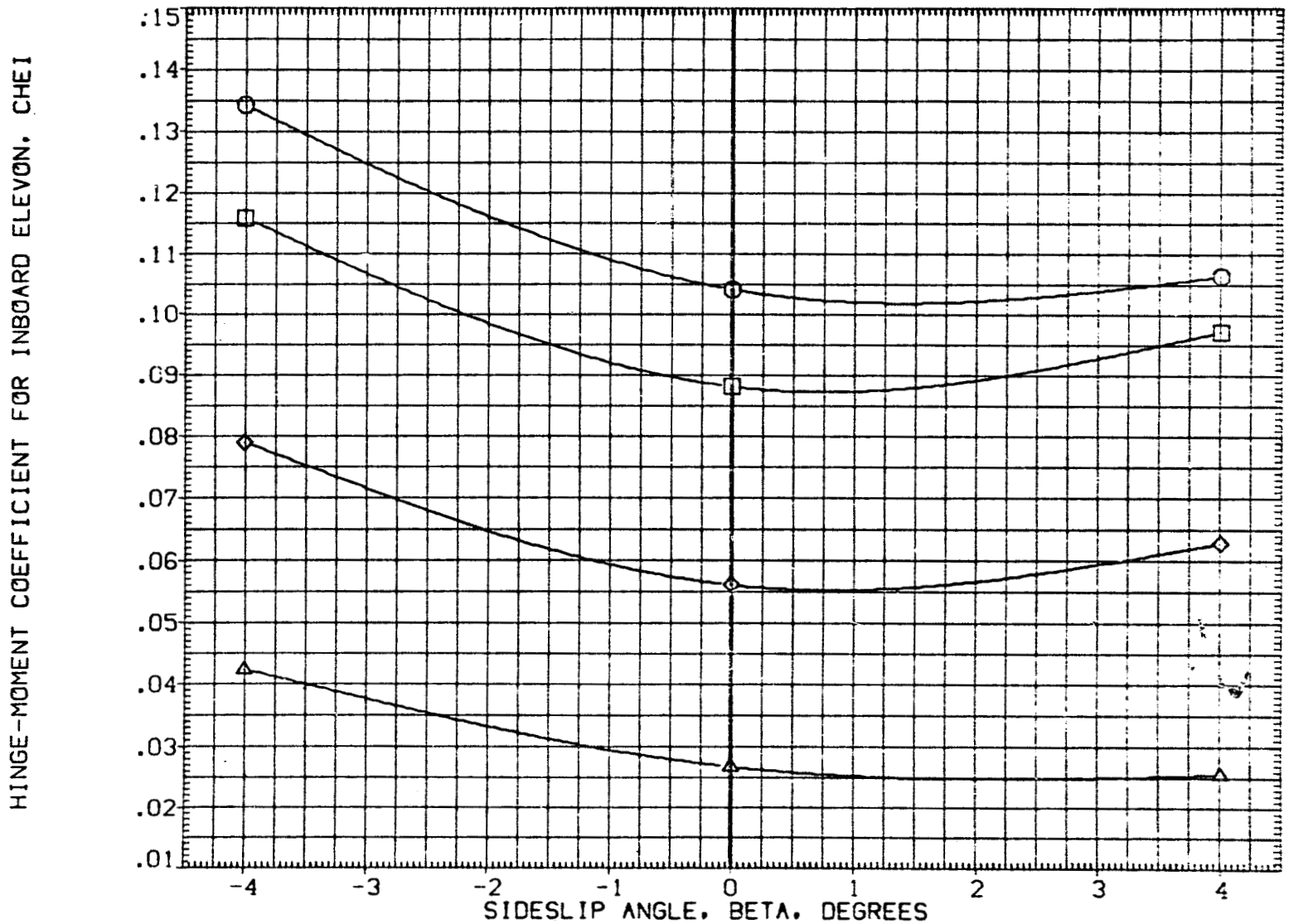



FIG. 21 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.1 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YA2) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4Y92) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y76) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

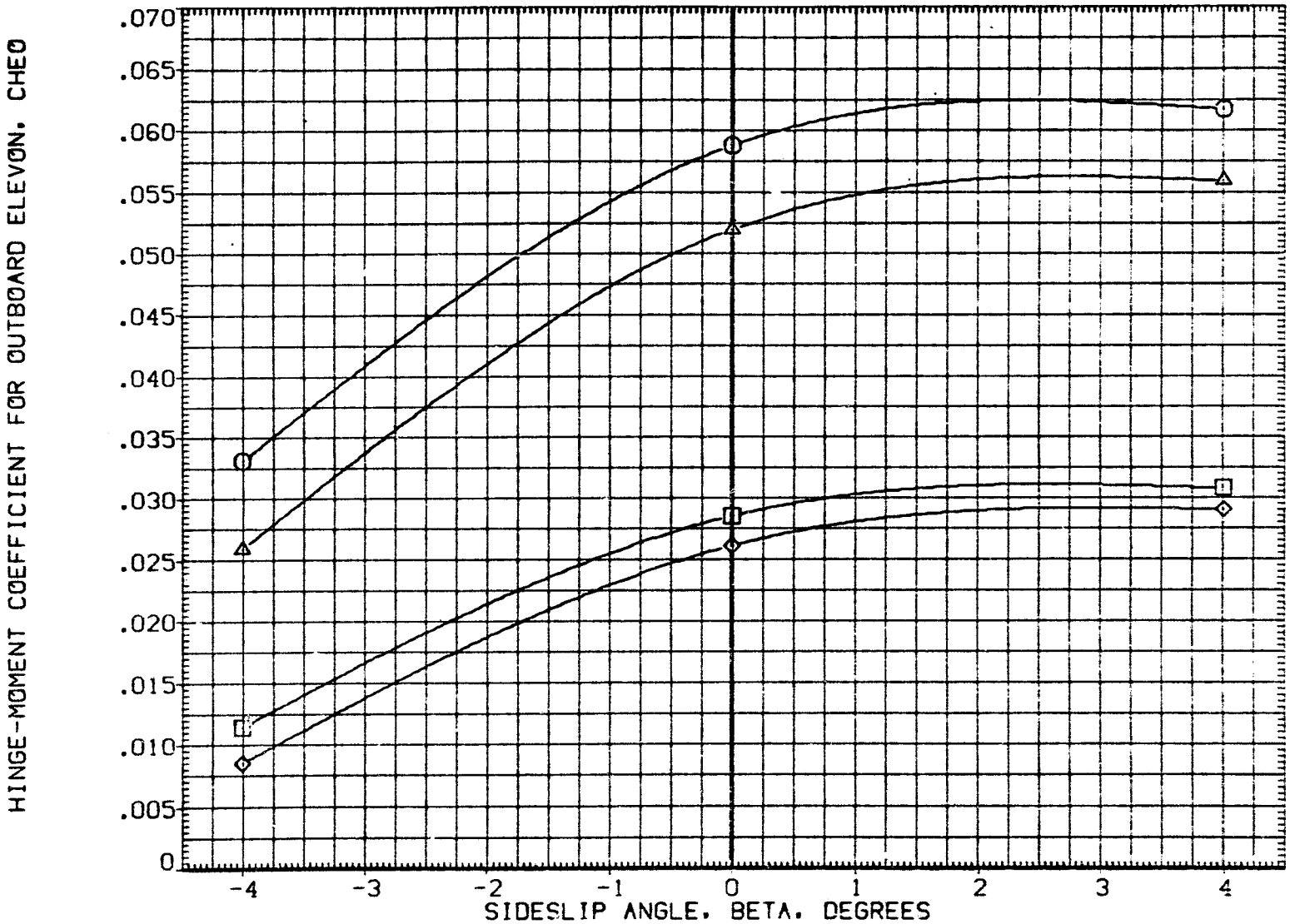



FIG. 21 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.1 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y86) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4Y55) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y66) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

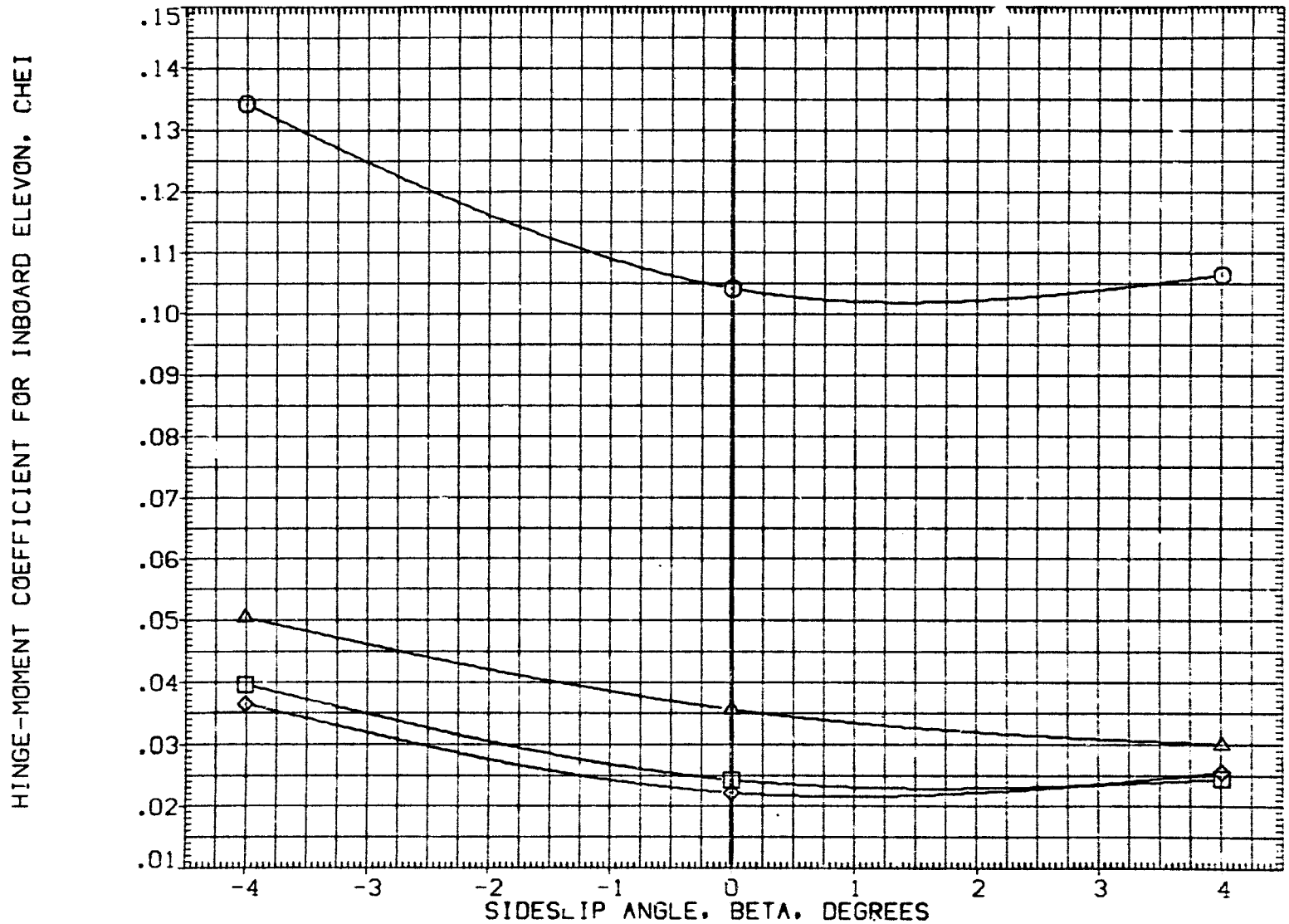



FIG. 21 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.1 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y86) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4Y55) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y66) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.00 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

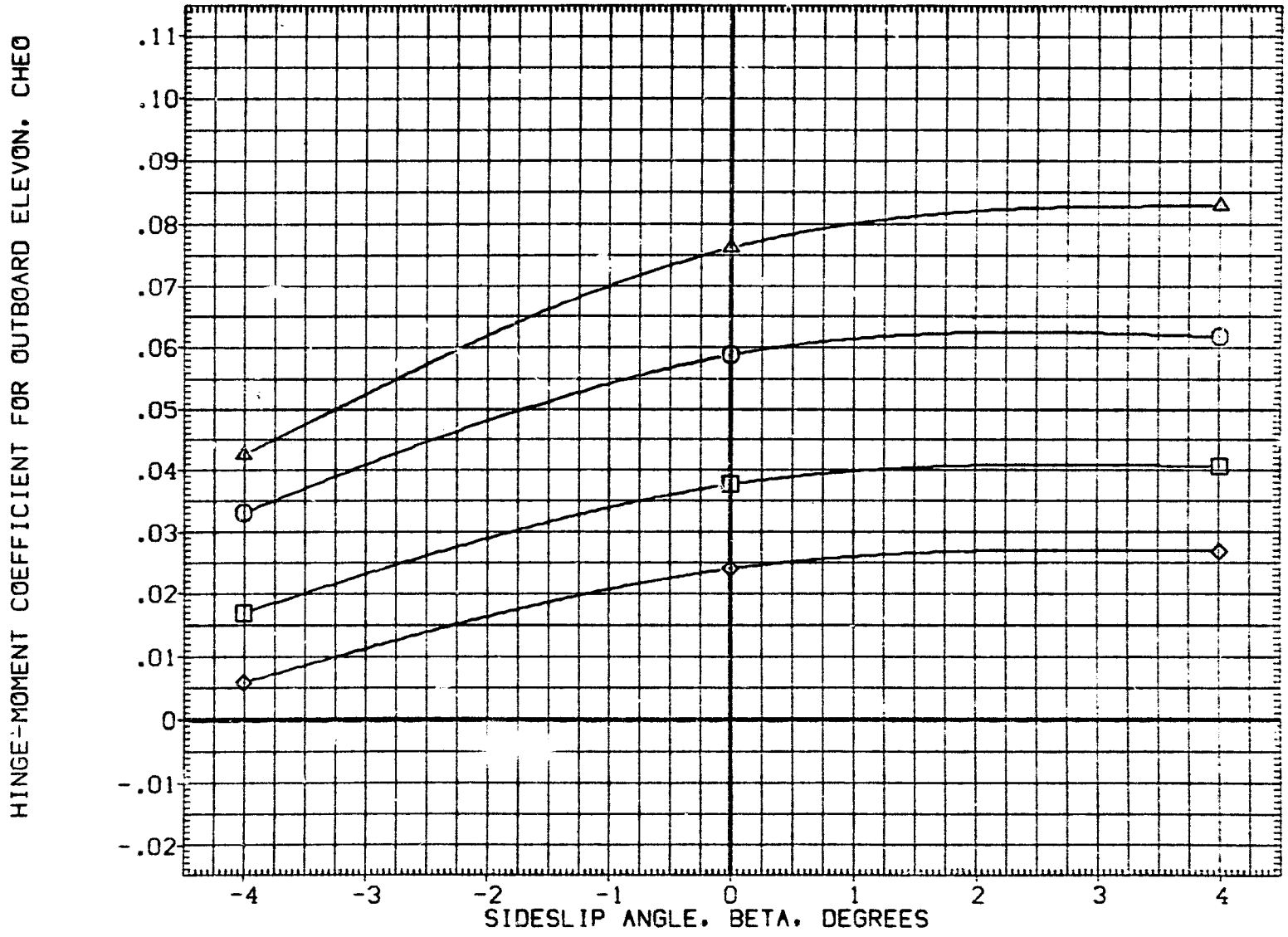



FIG. 21 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.1 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YA3) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4Y93) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y77) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

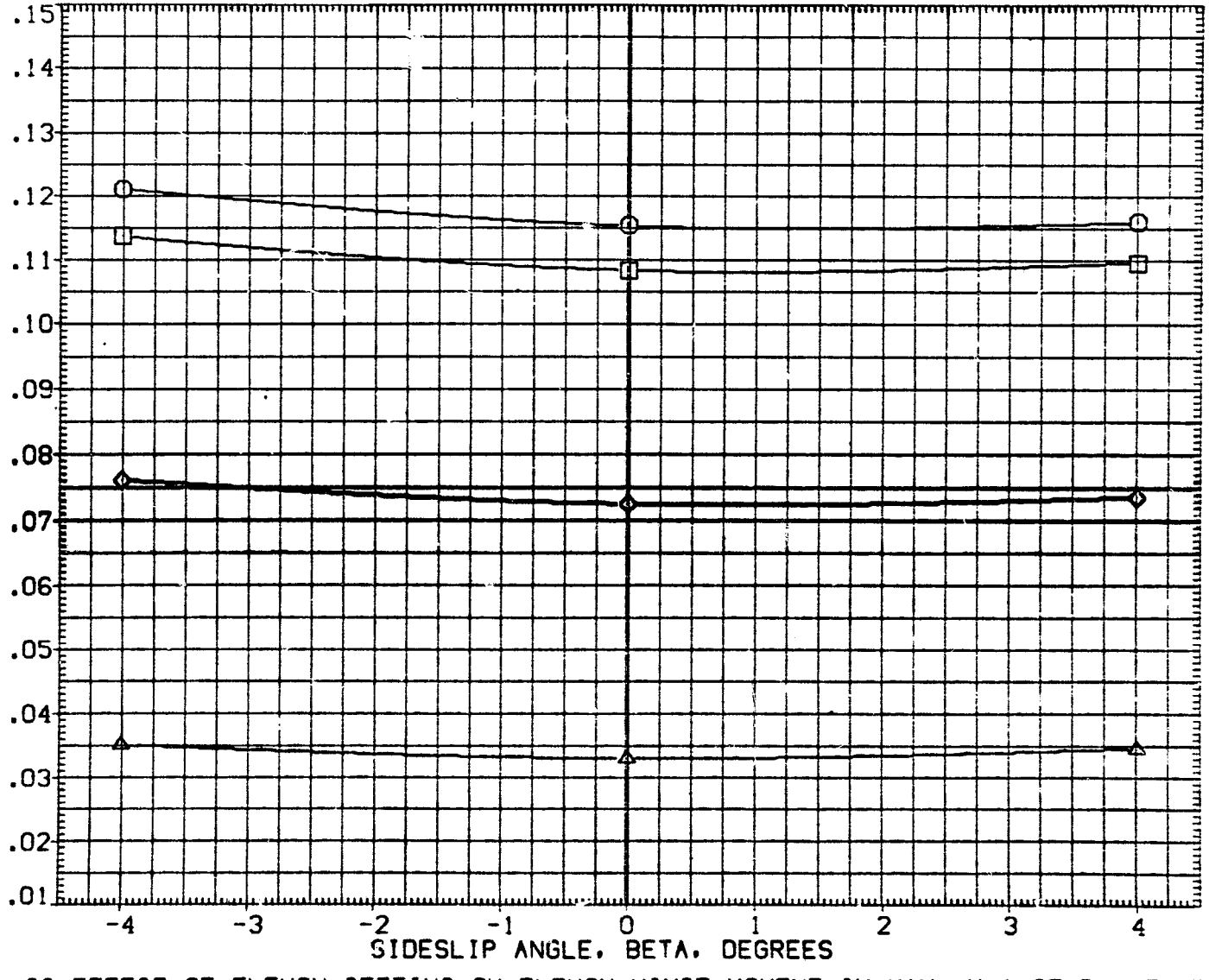



FIG. 22 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.25 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | □ | ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) | .000 | .000 | 1.250 | 4.250 |
| (RE4YA3) | ▭ | ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4Y93) | ◇ | ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y77) | △ | ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

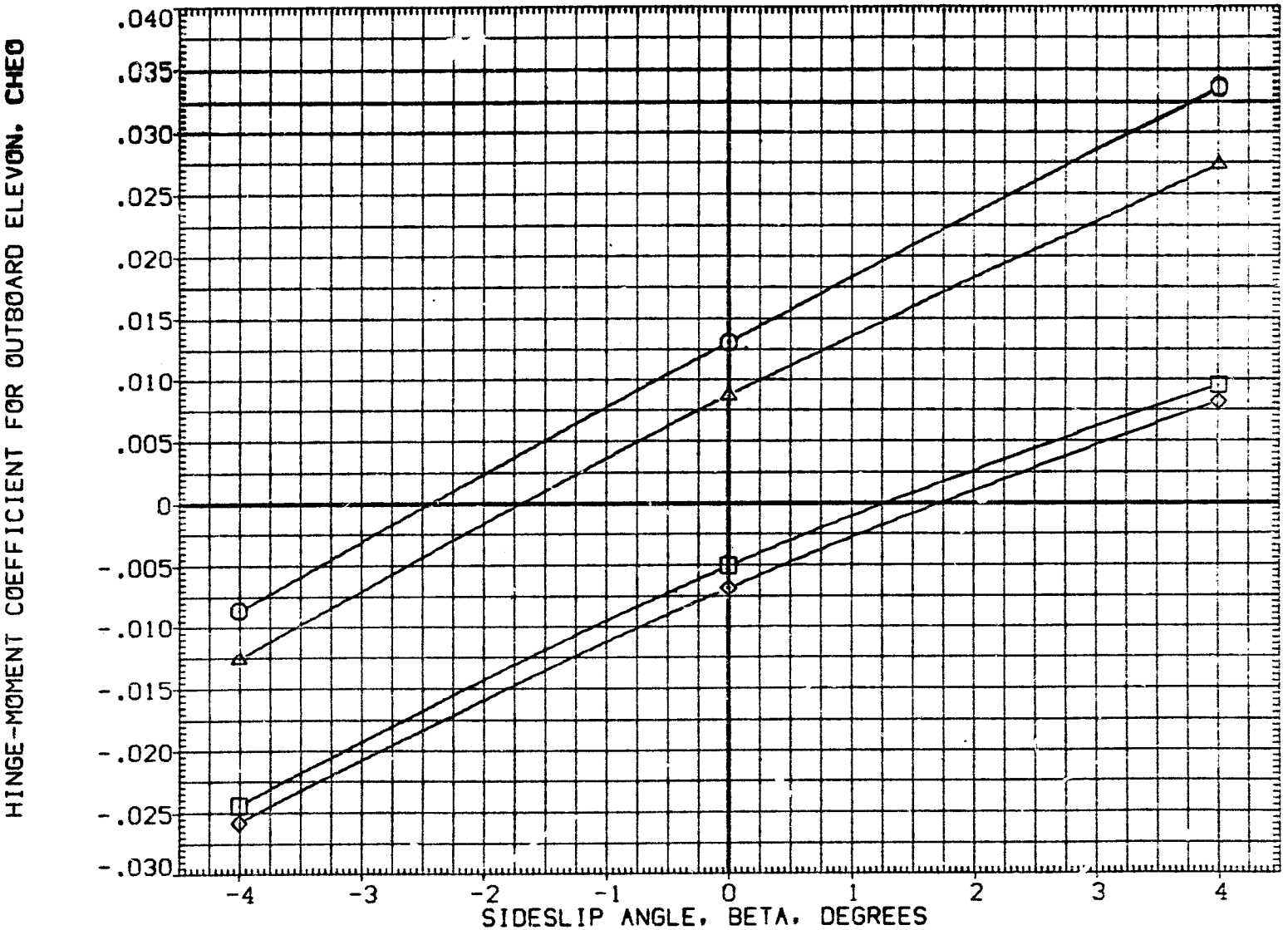



FIG. 22 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.25 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y56) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

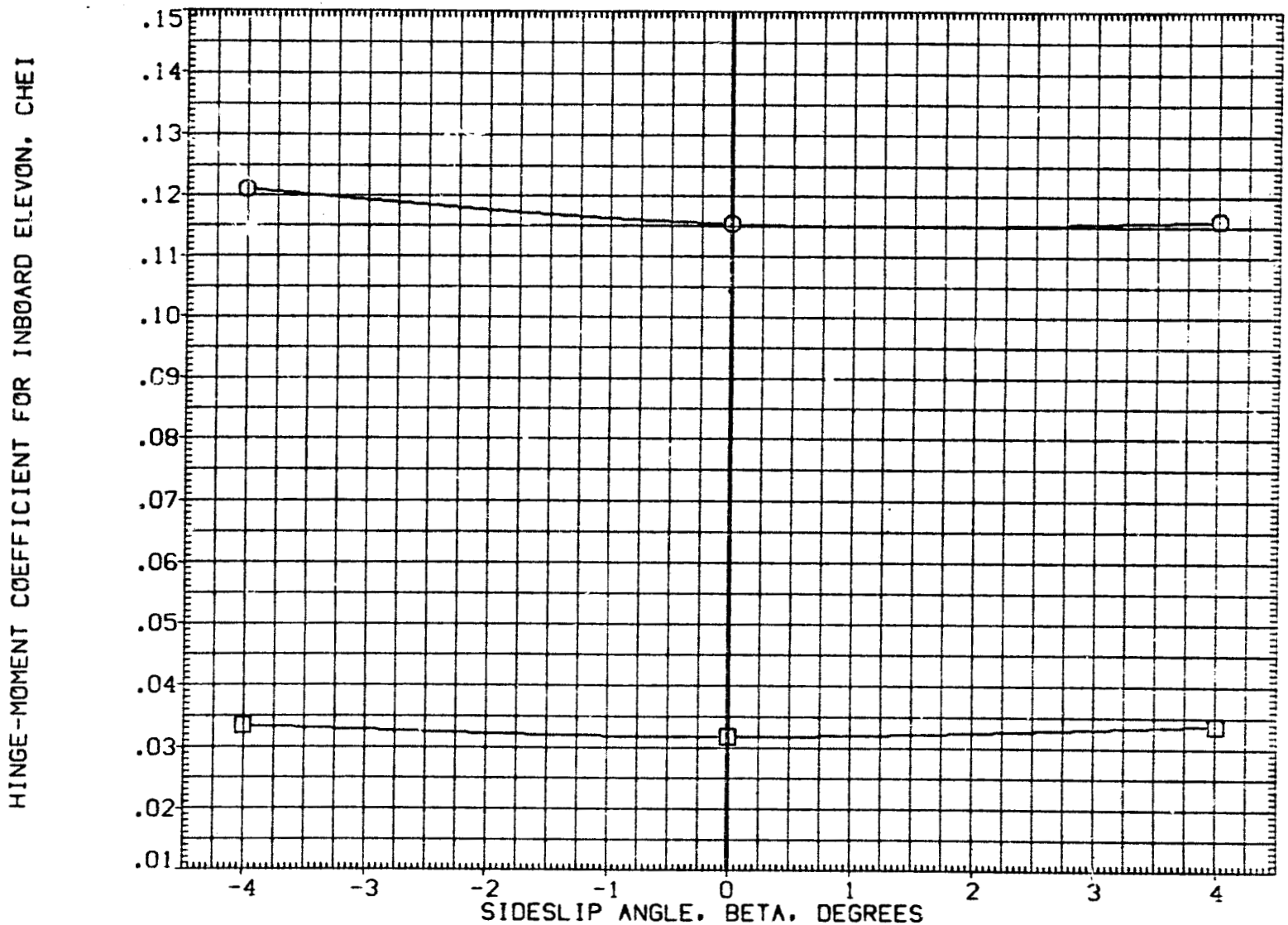



FIG. 22 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.25 PLUME OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y31) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y56) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

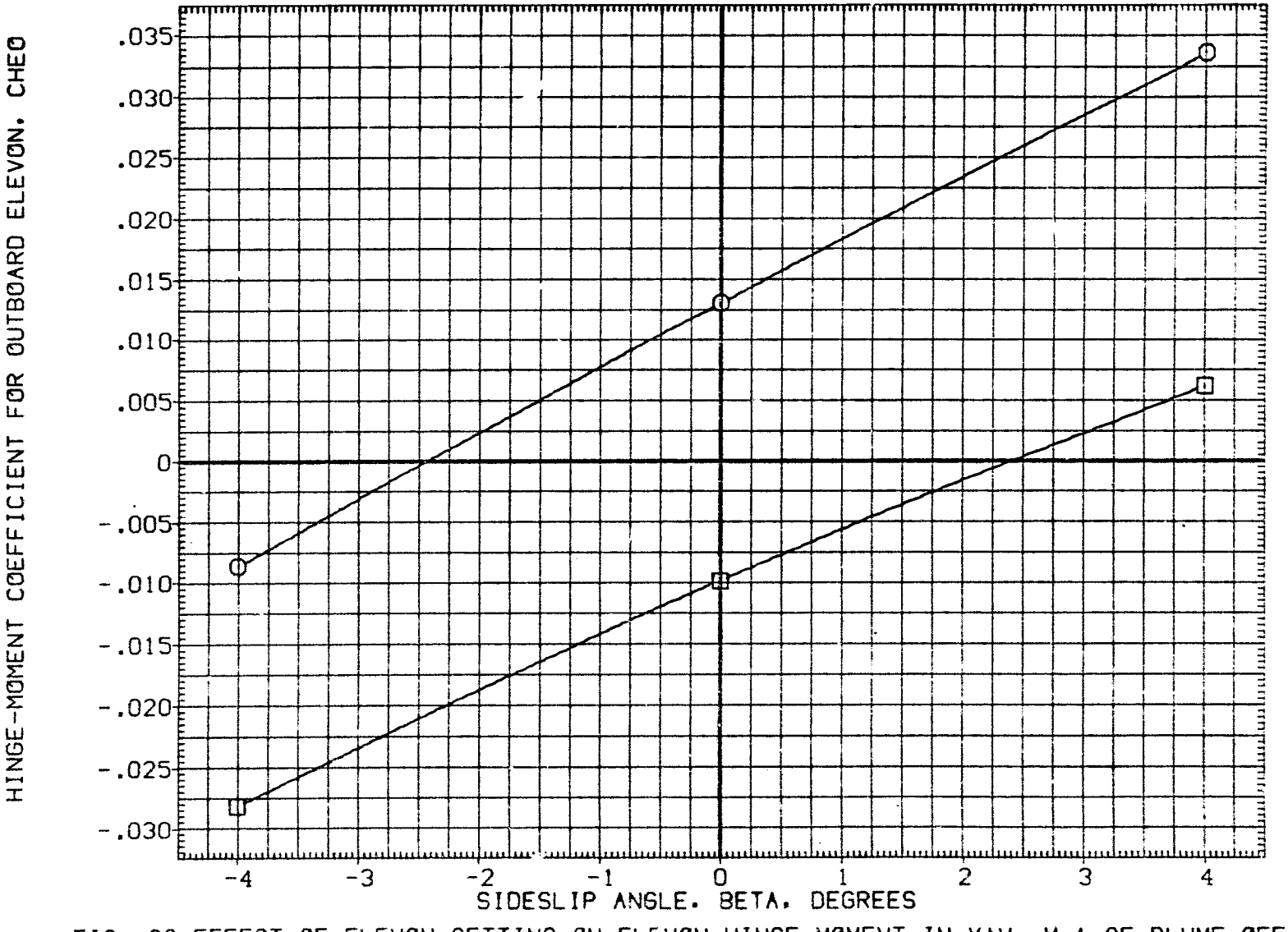



FIG. 22 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.25 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YA4) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4Y94) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y78) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

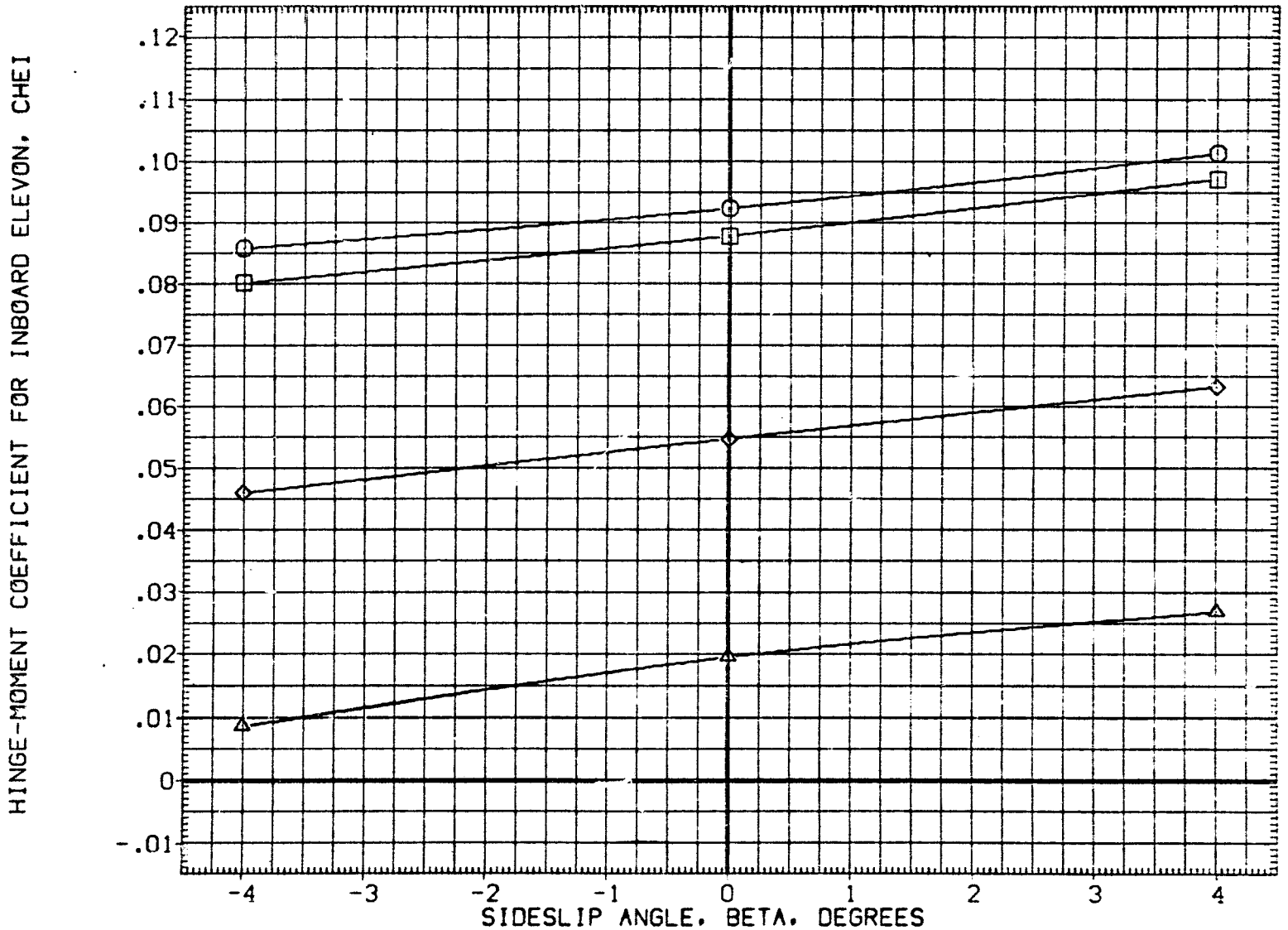



FIG. 23 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.4 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YA4) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4Y94) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y78) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

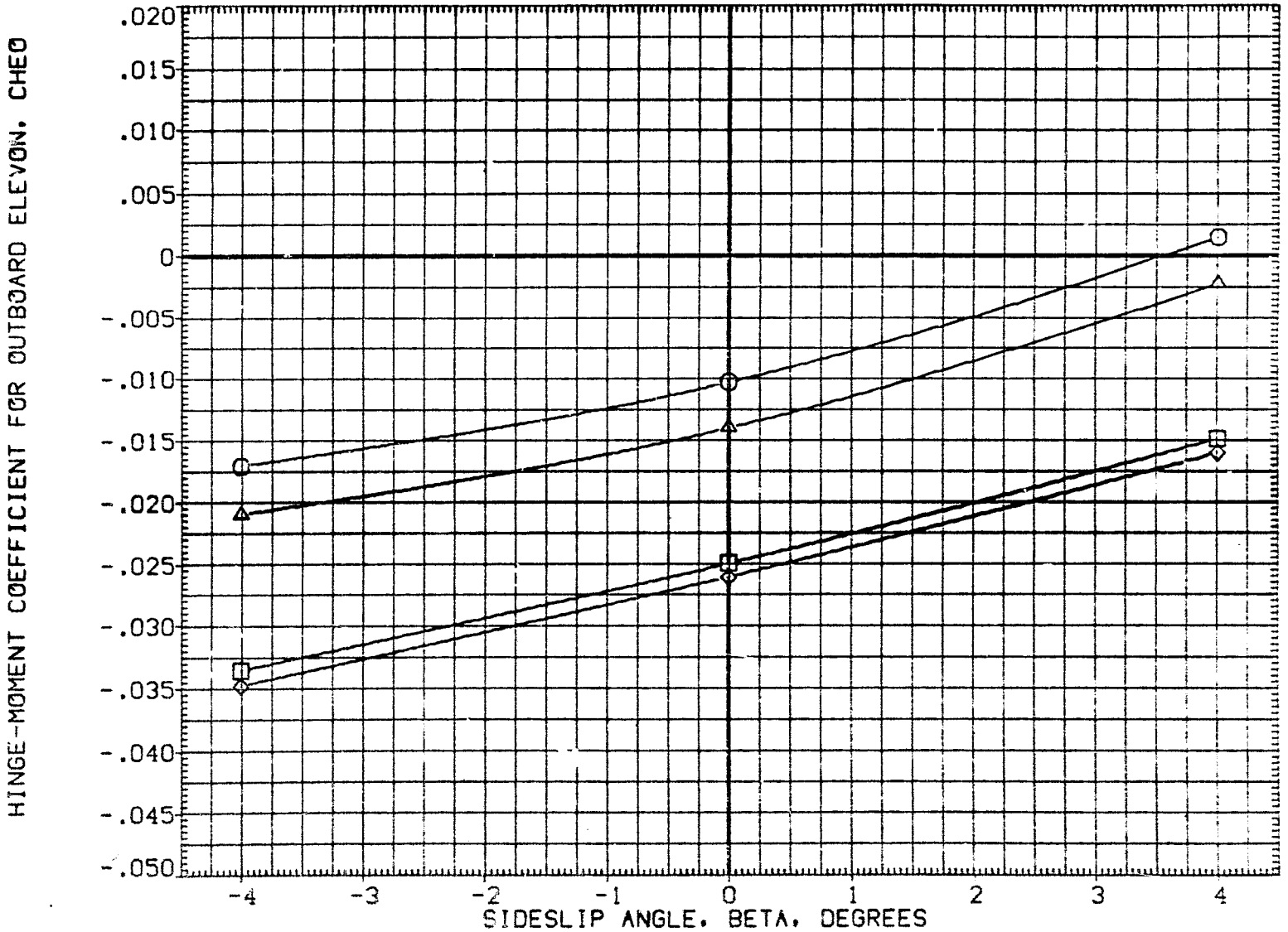



FIG. 23 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.4 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y57) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y68) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

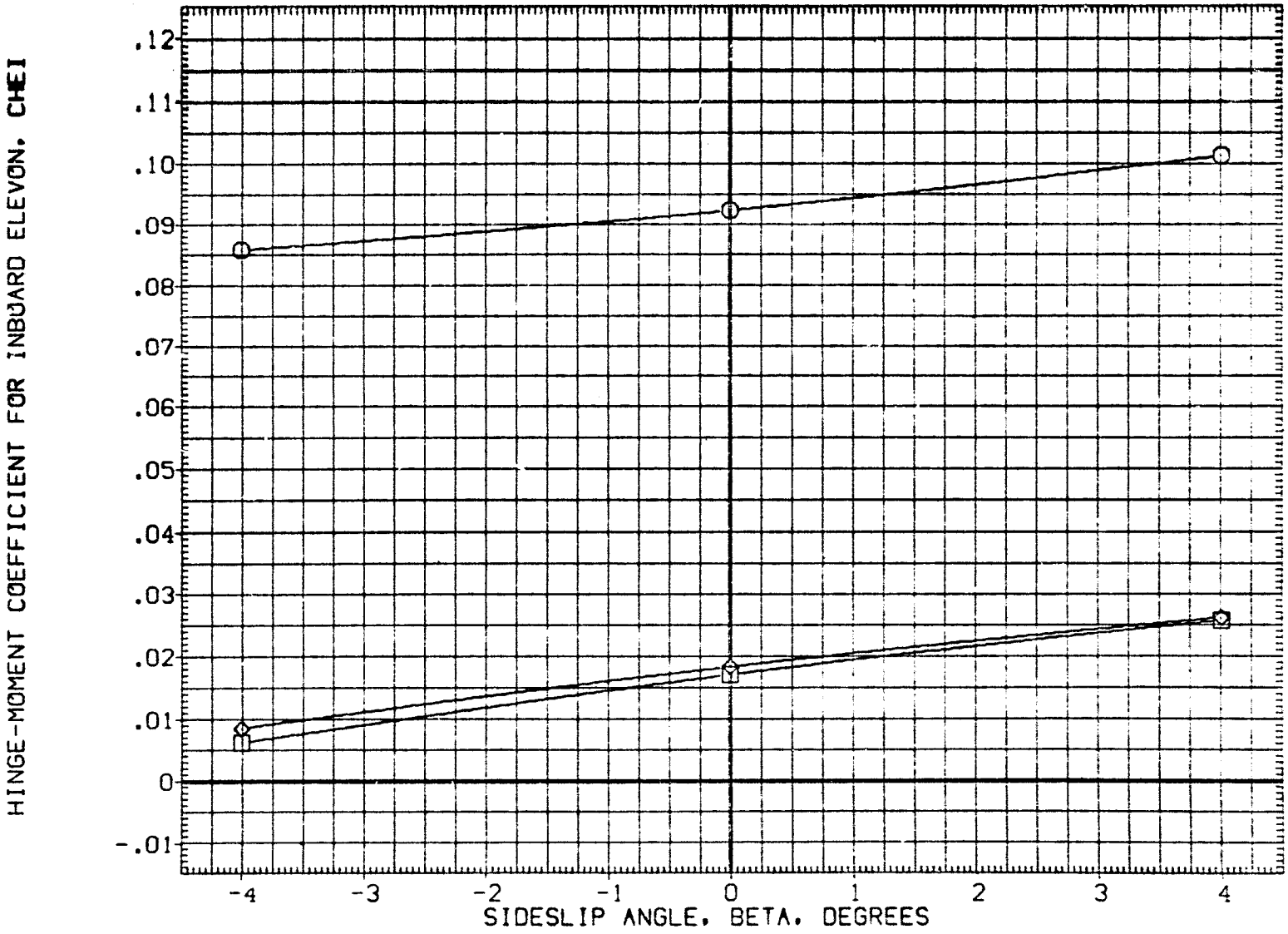



FIG. 23 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.4 PLUME OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y32) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y57) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y68) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

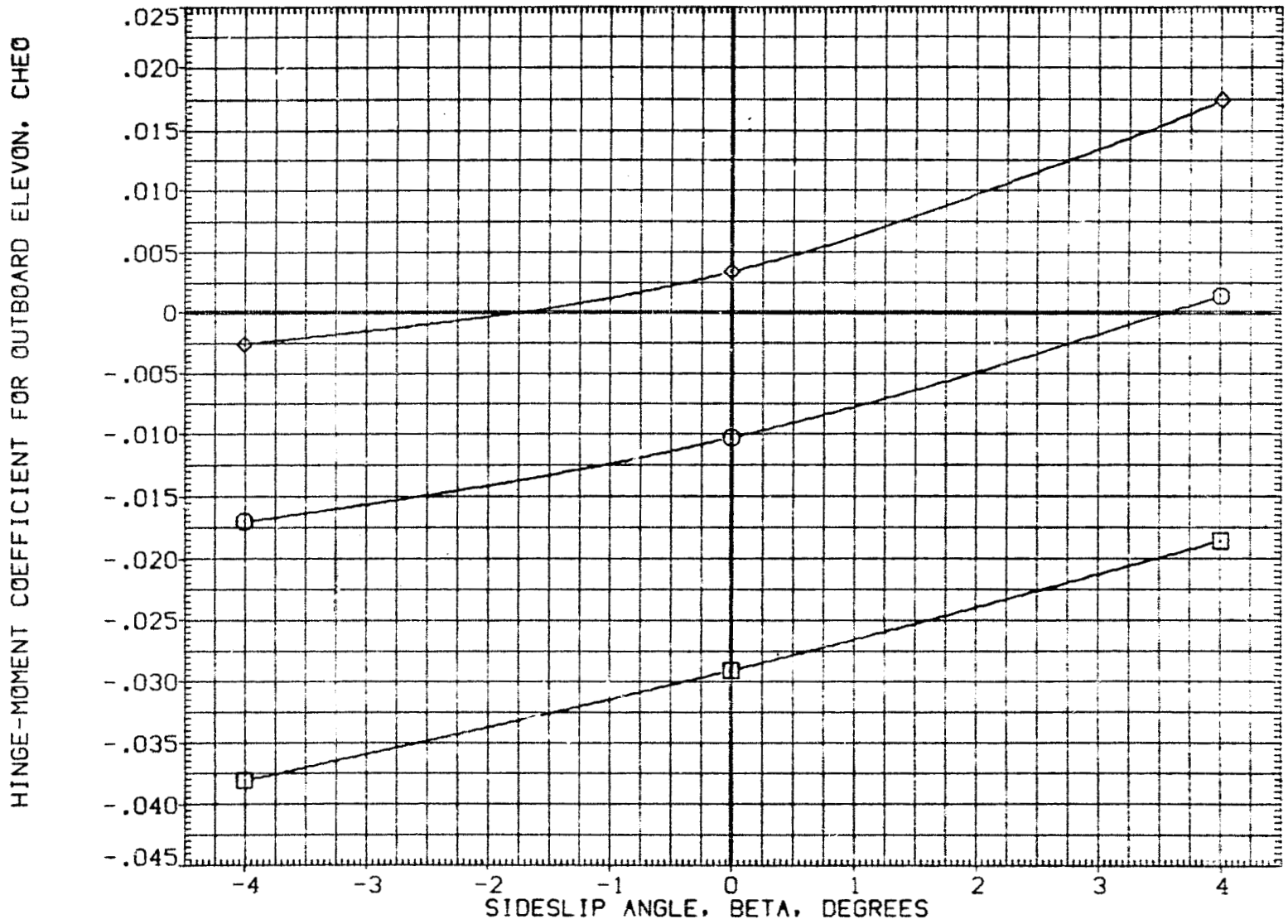



FIG. 23 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.4 PLUME OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4XA5) | ◻ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .600 | 3.400 |
| (RE4X95) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4X79) | ⧖ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

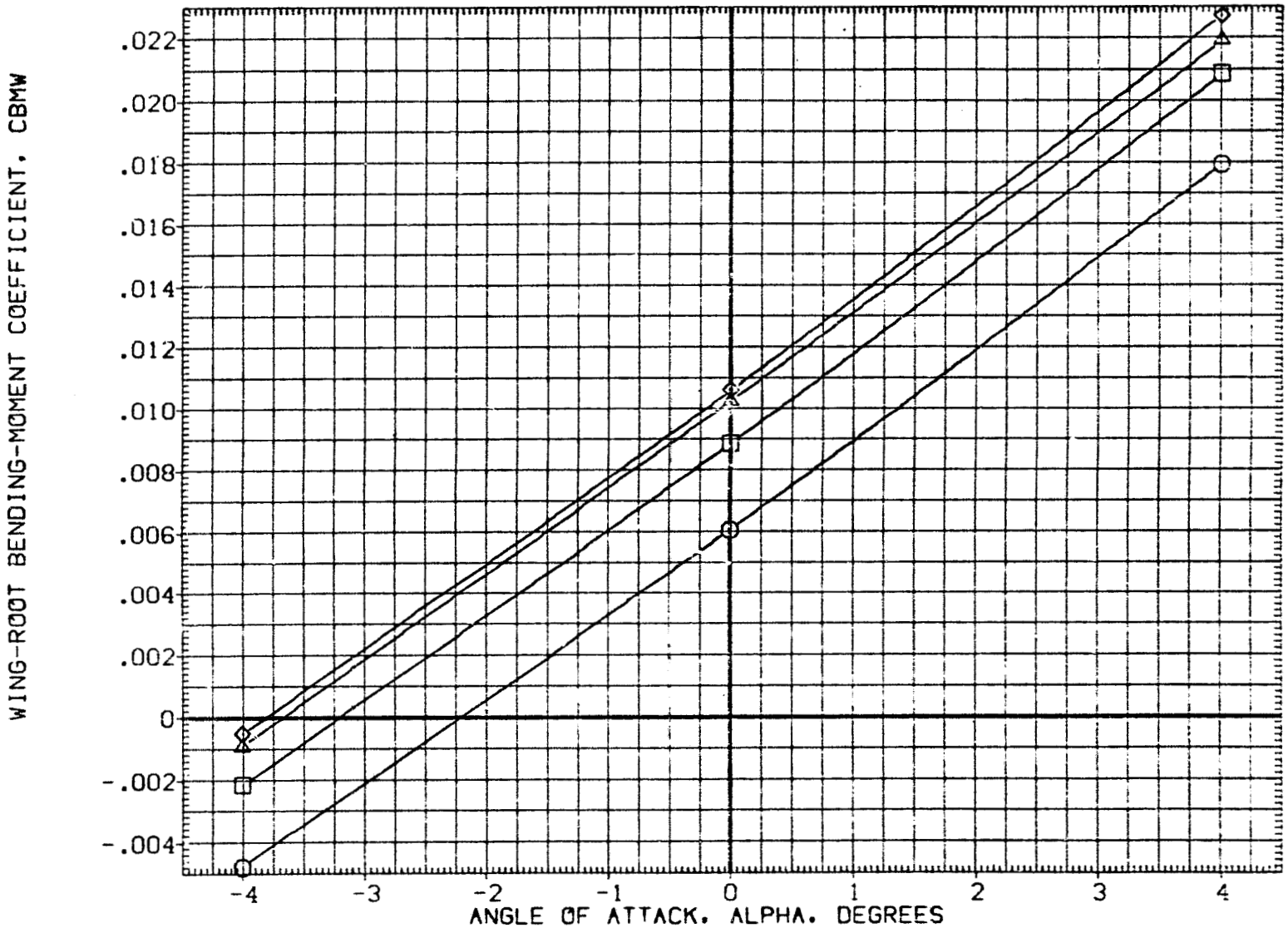



FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4XA5) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .600 | 3.400 |
| (RE4X95) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4X79) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

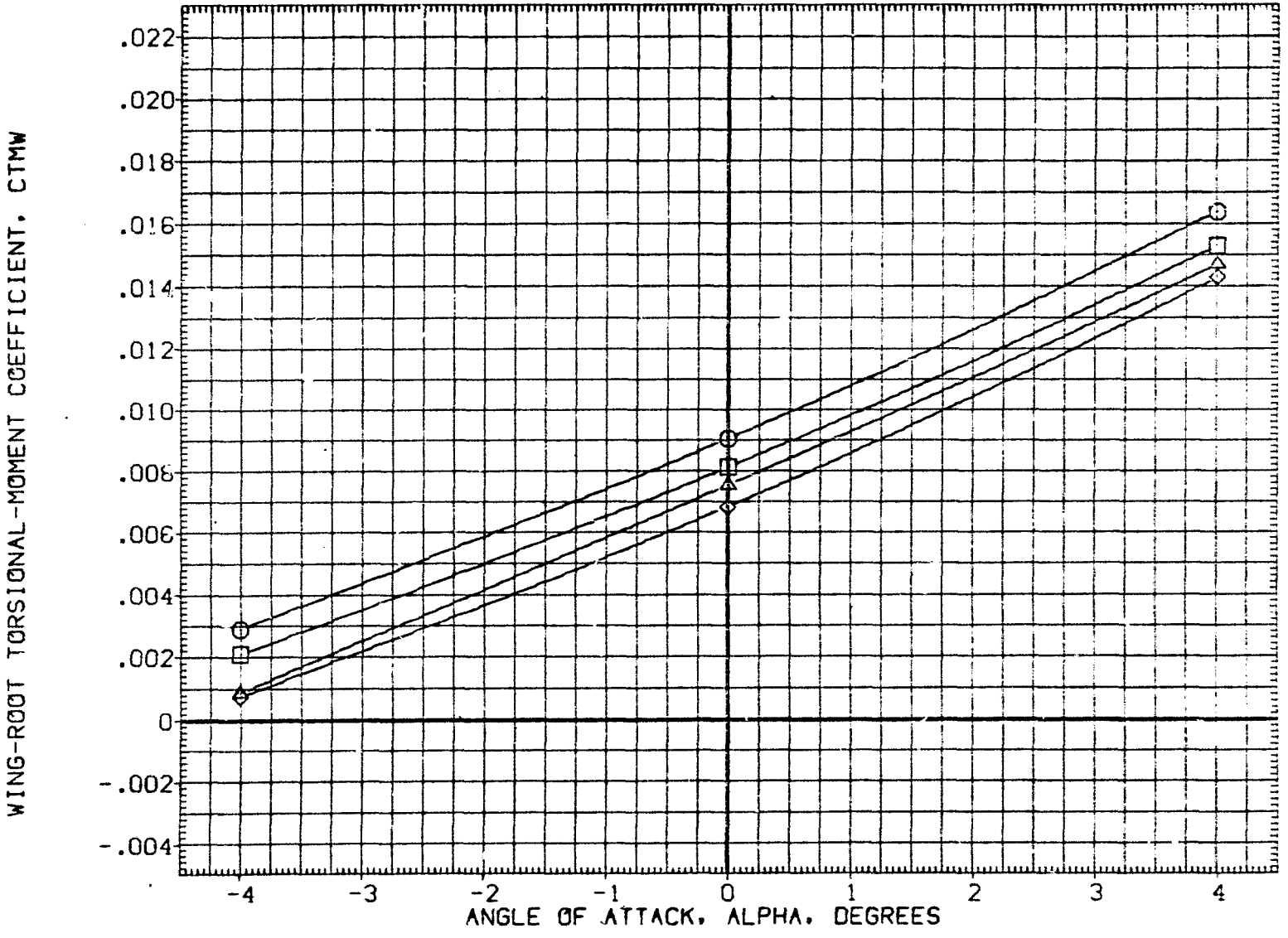



FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4XA5) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .600 | 3.400 |
| (RE4X95) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4X79) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

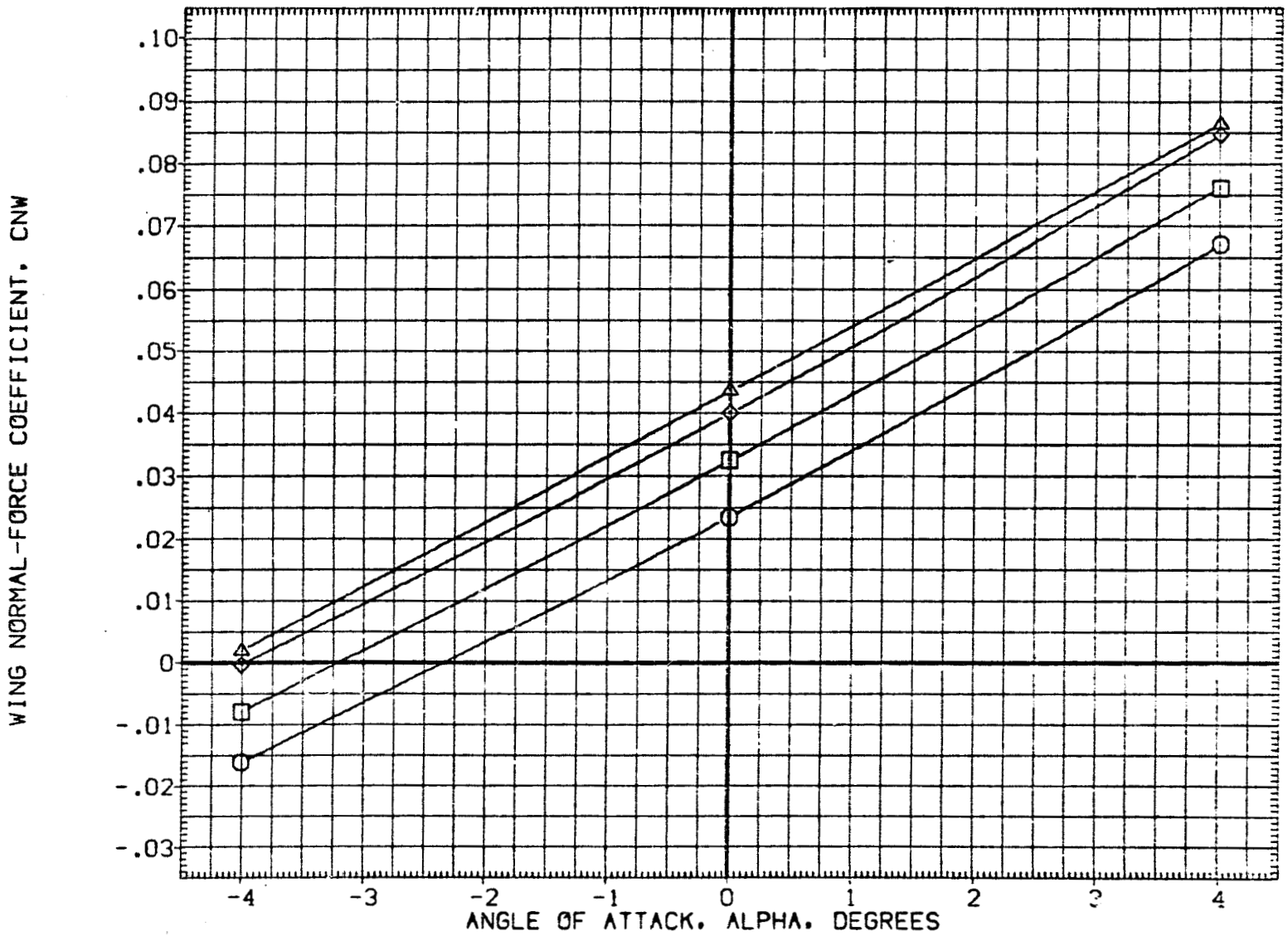



FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X87) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4X58) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4X69) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

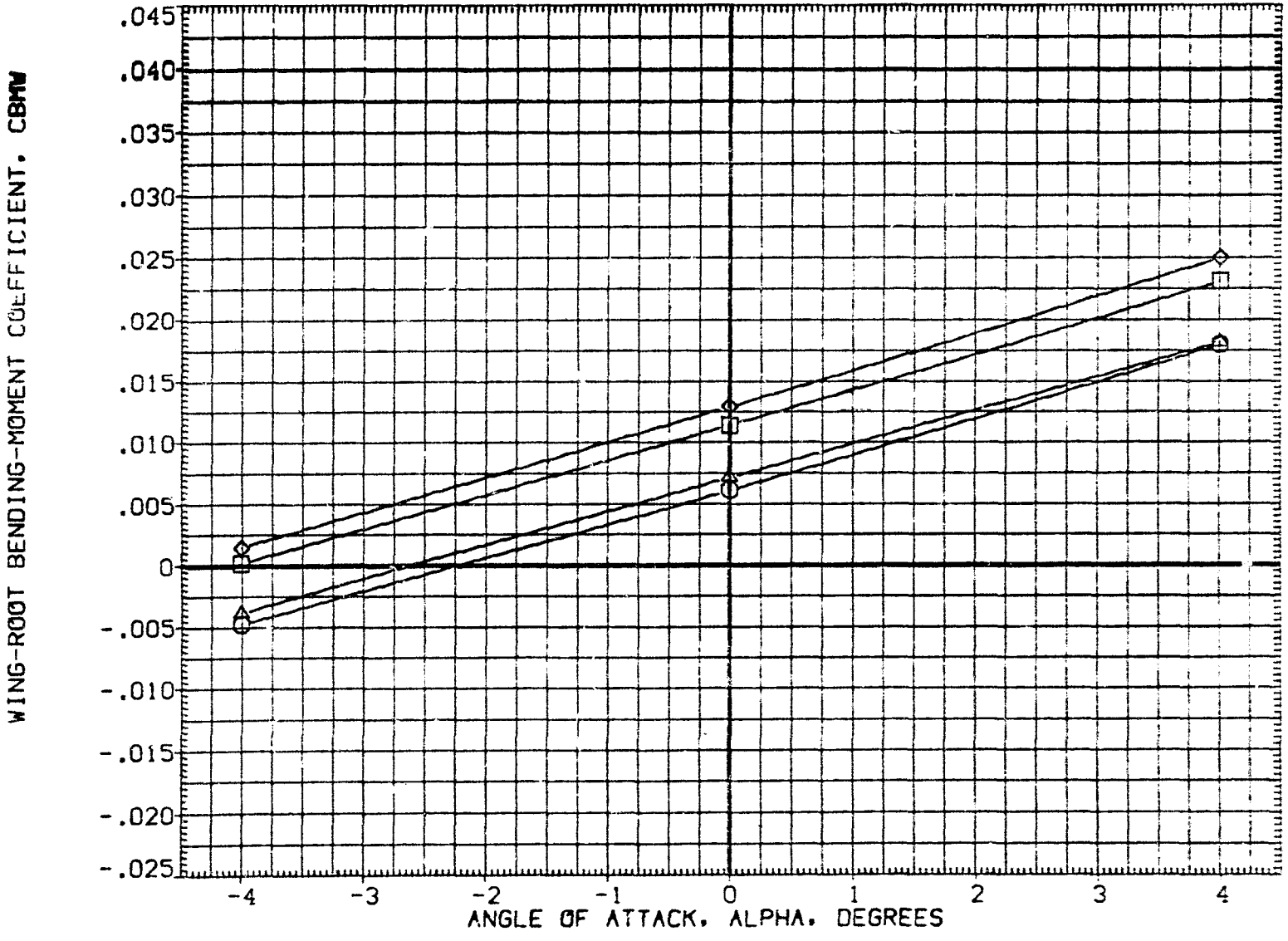



FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X87) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4X58) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4X69) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 26[illegible].3000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

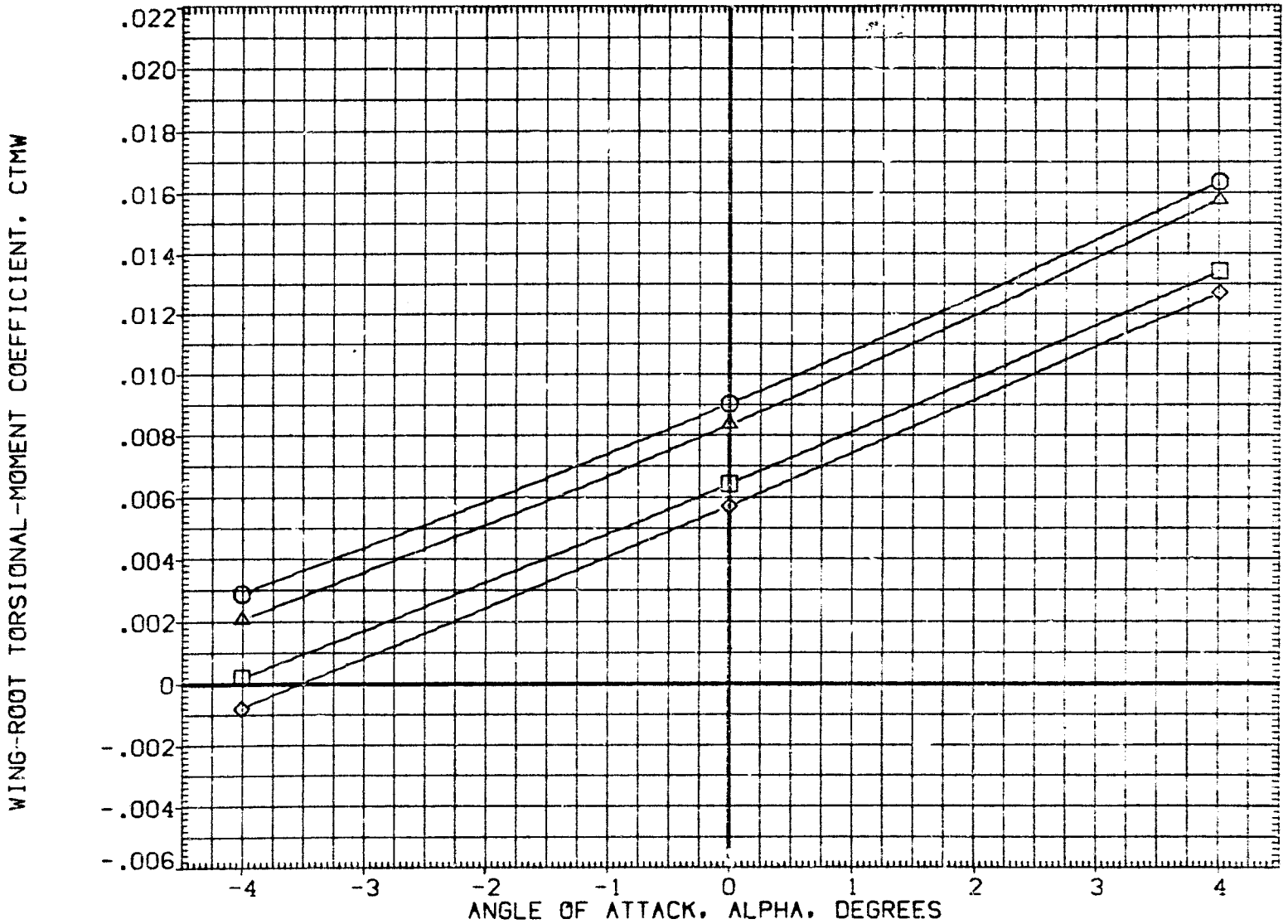



FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X37) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4X58) | ⊗ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4X69) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

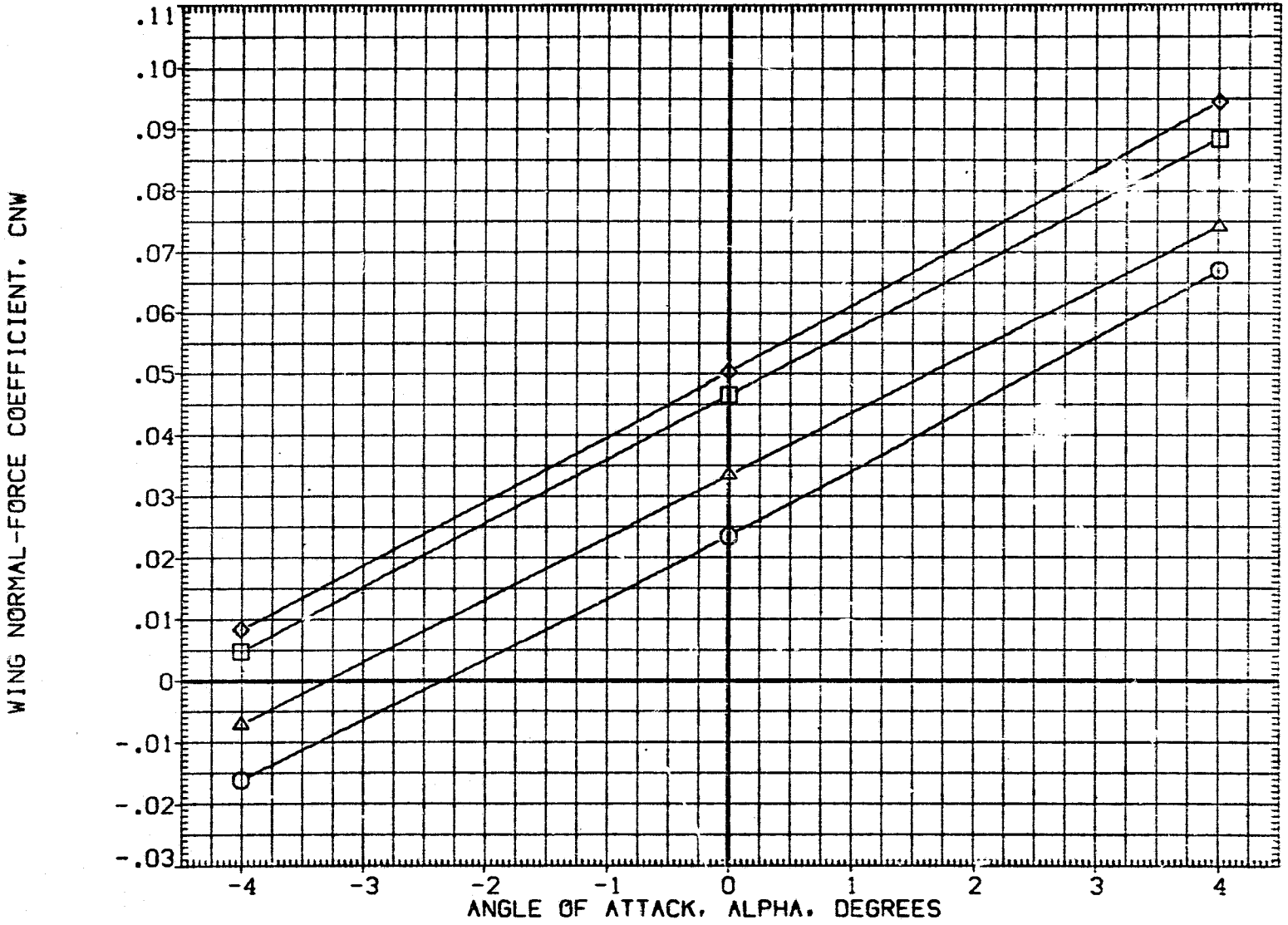



FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4XA6) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .900 | 4.250 |
| (RE4X96) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4X80) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

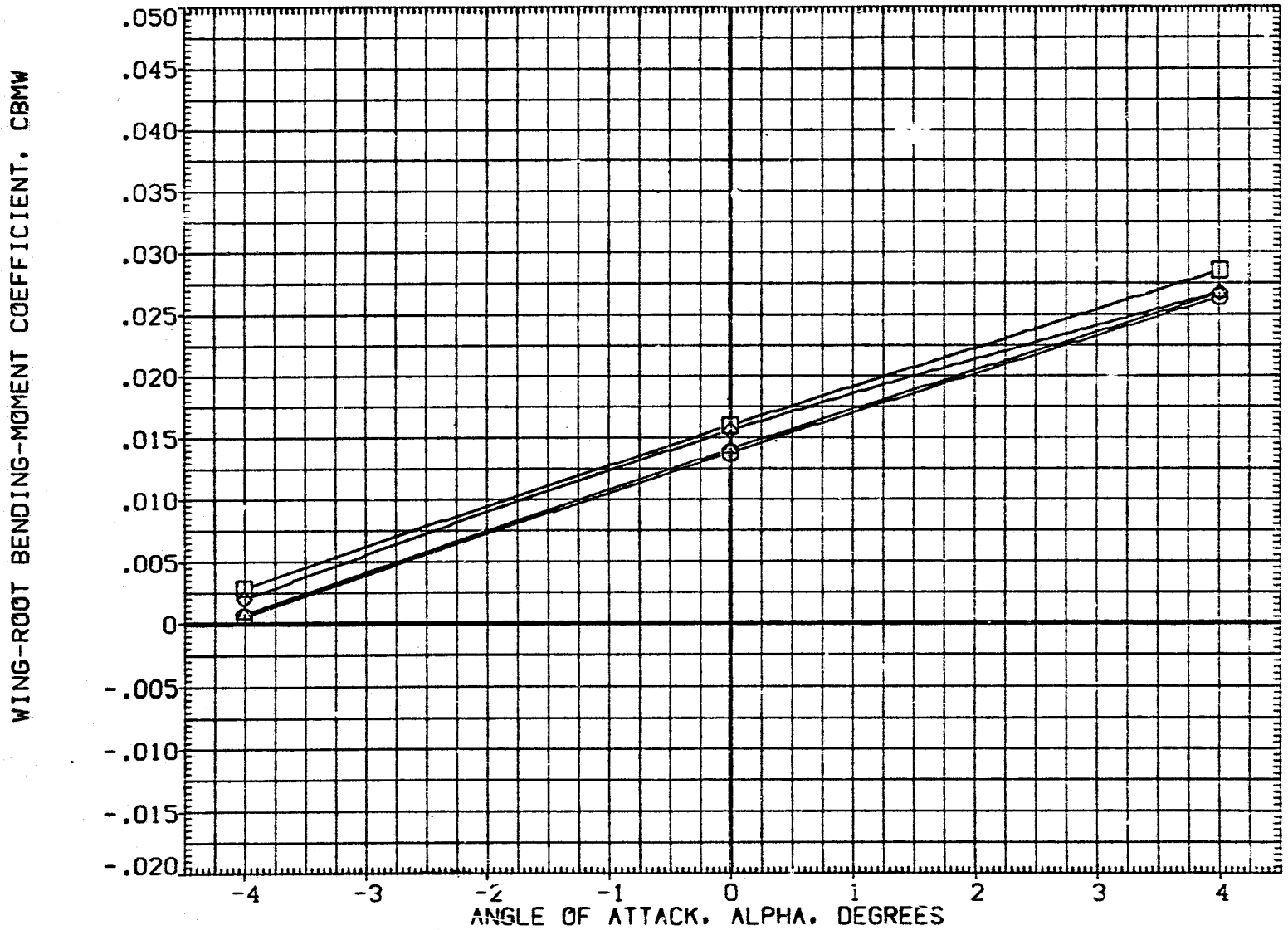



FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4XA6) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .900 | 4.250 |
| (RE4X96) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4X80) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

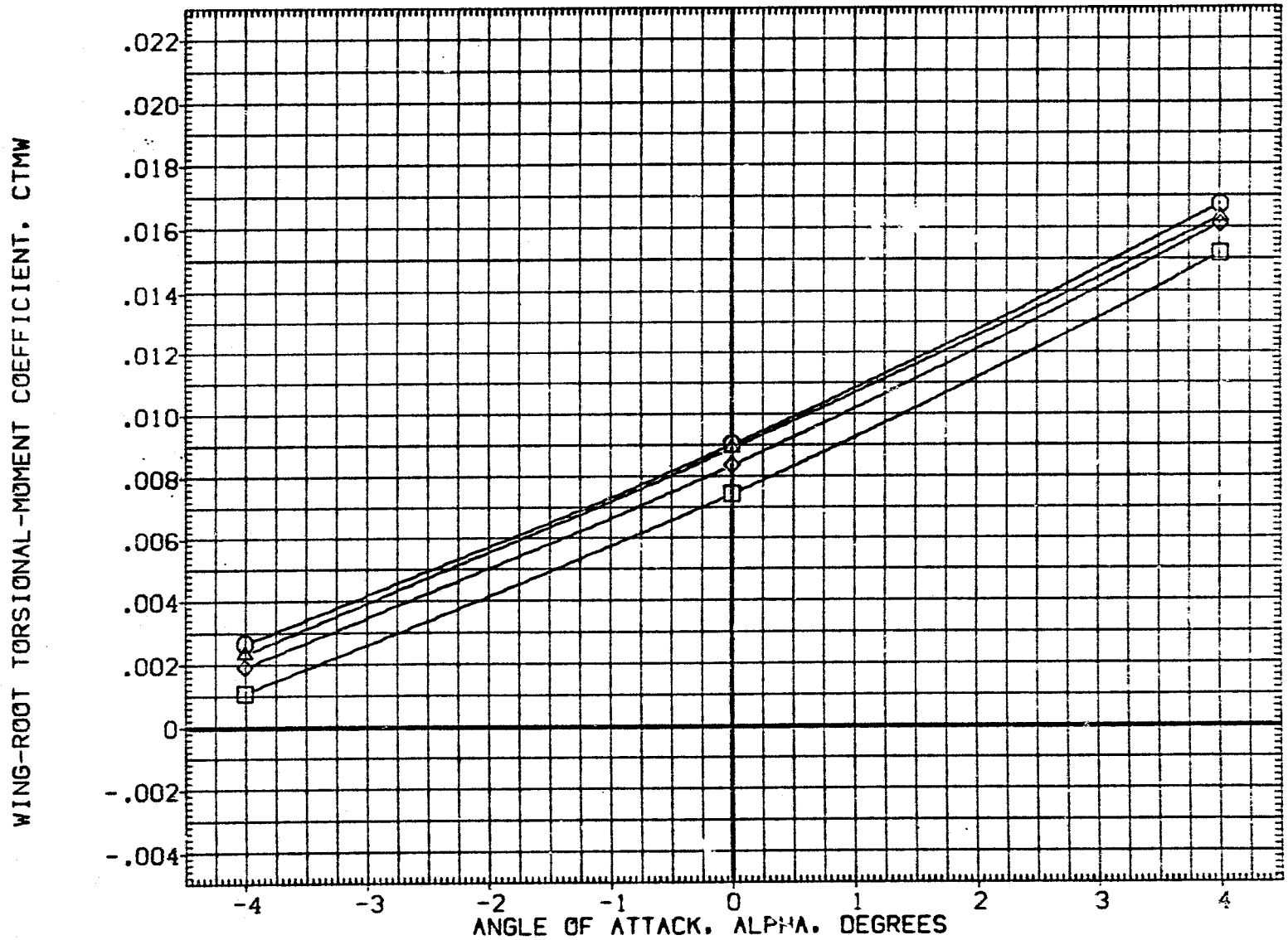



FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4XA6) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .900 | 4.250 |
| (RE4X96) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4X80) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

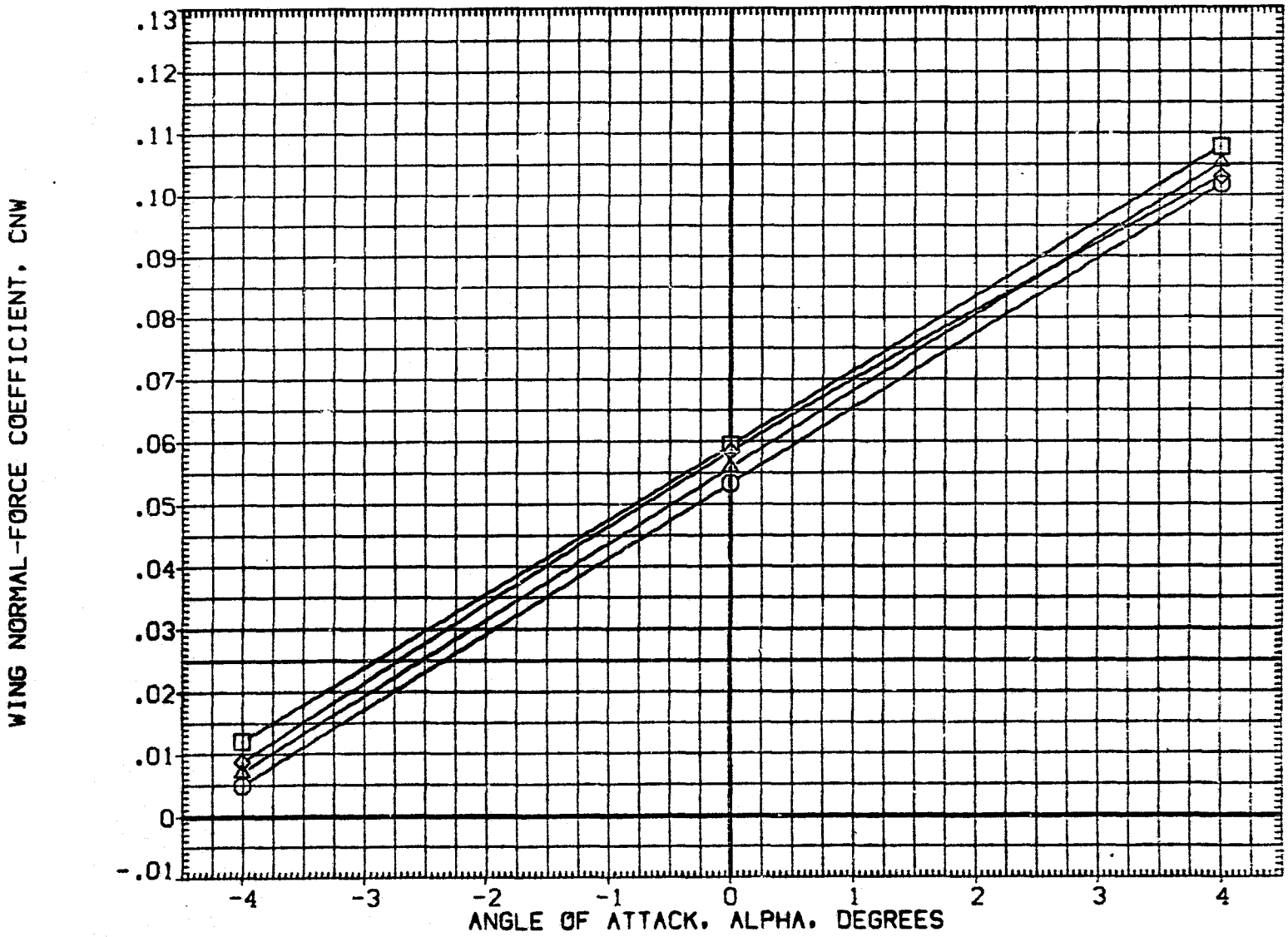



FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X88) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4X59) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X70) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .900 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

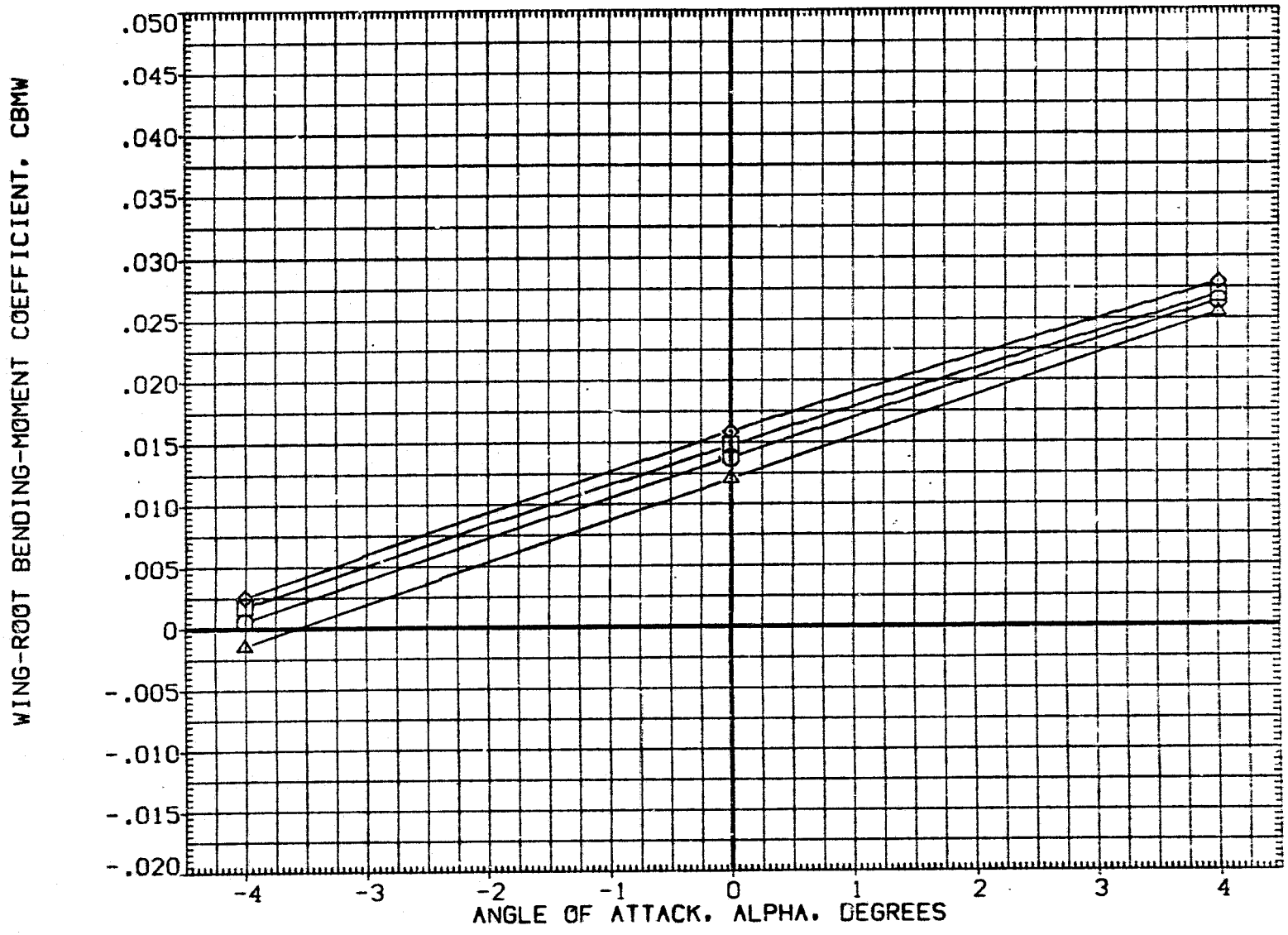



FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X21) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X88) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4X59) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X70) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

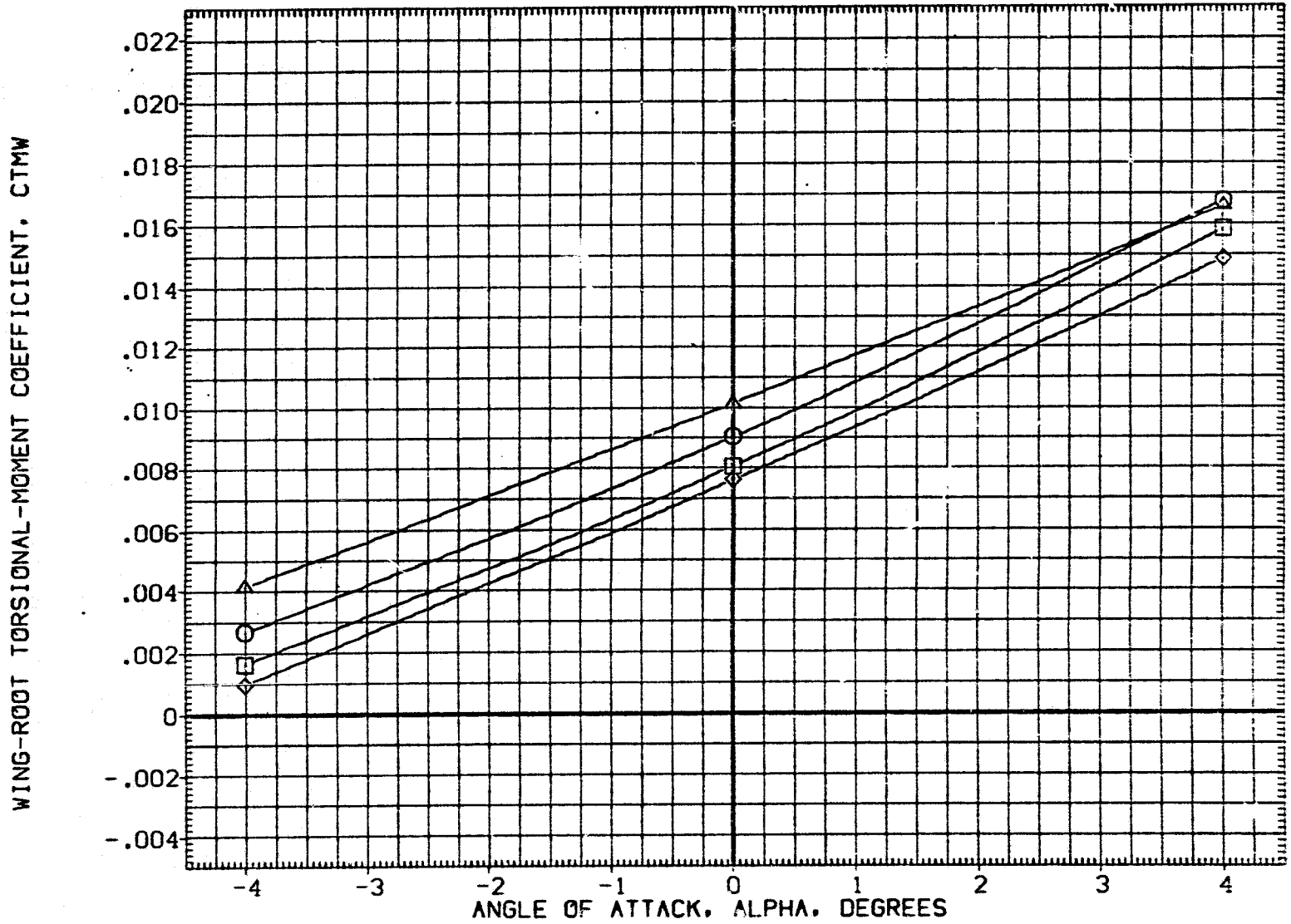



FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X21) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X88) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4X59) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X70) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

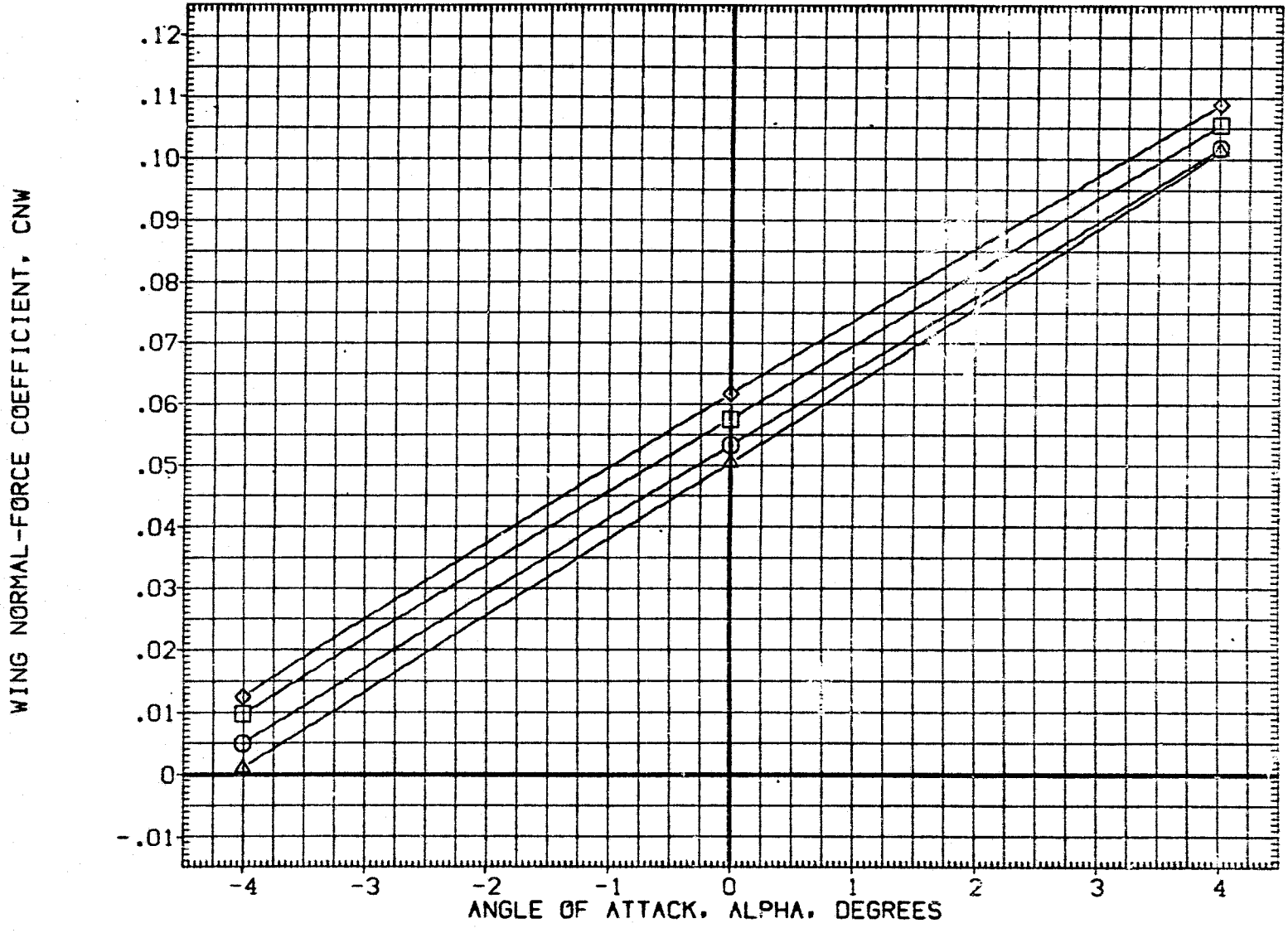



FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XA7) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4X97) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4X81) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

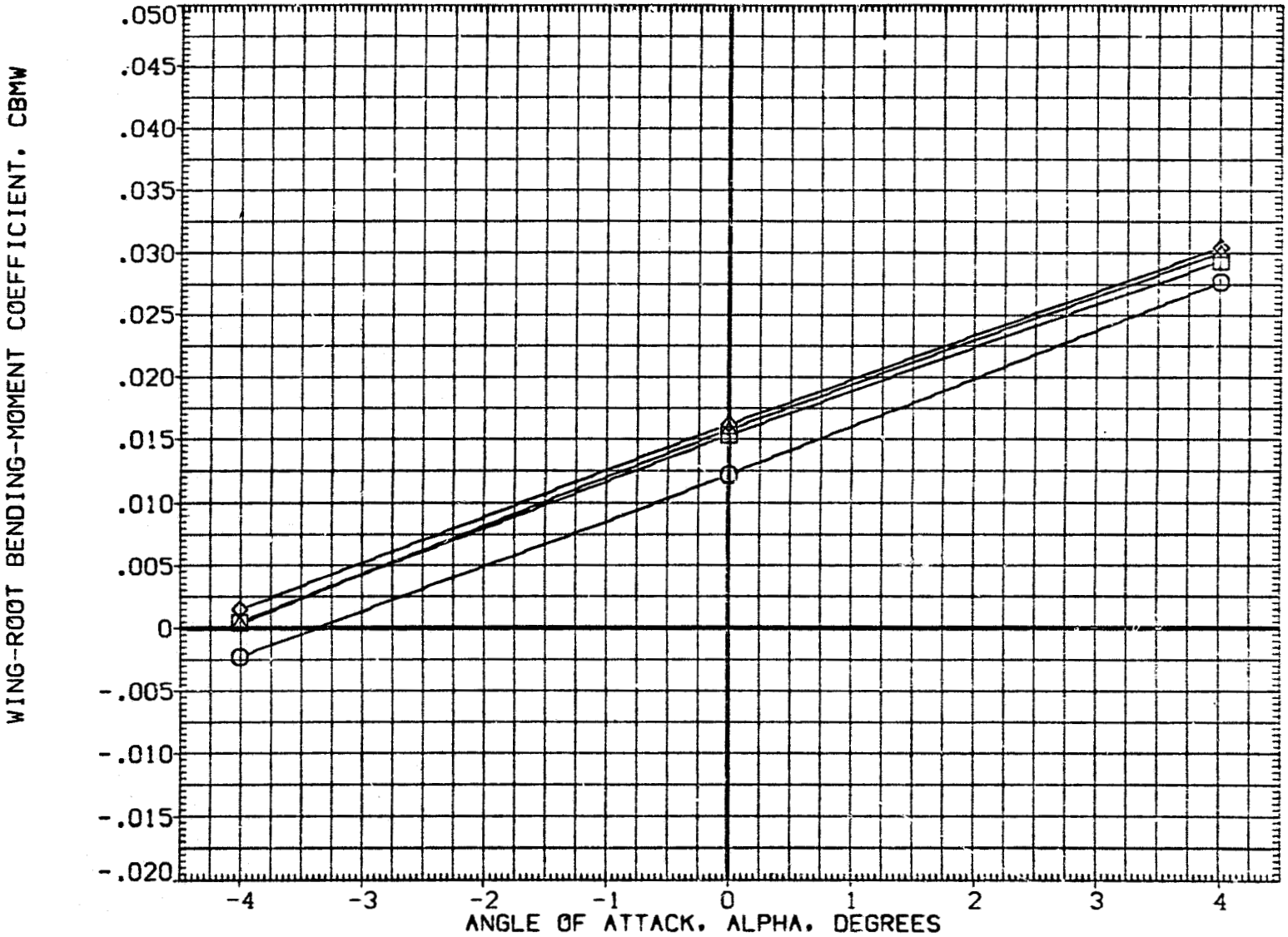



FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XA7) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4X97) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4X81) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

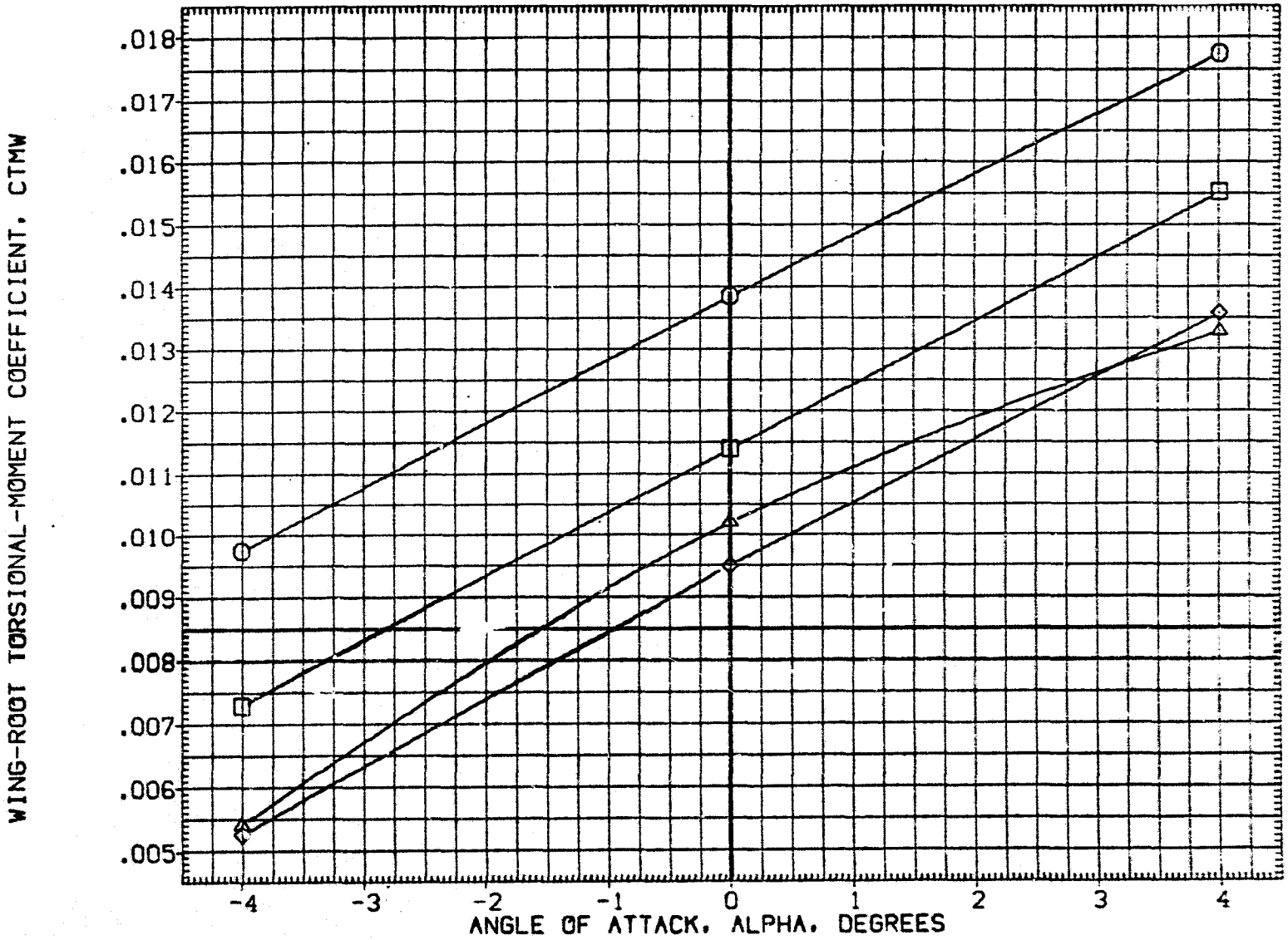



FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XA7) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4X97) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4X81) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

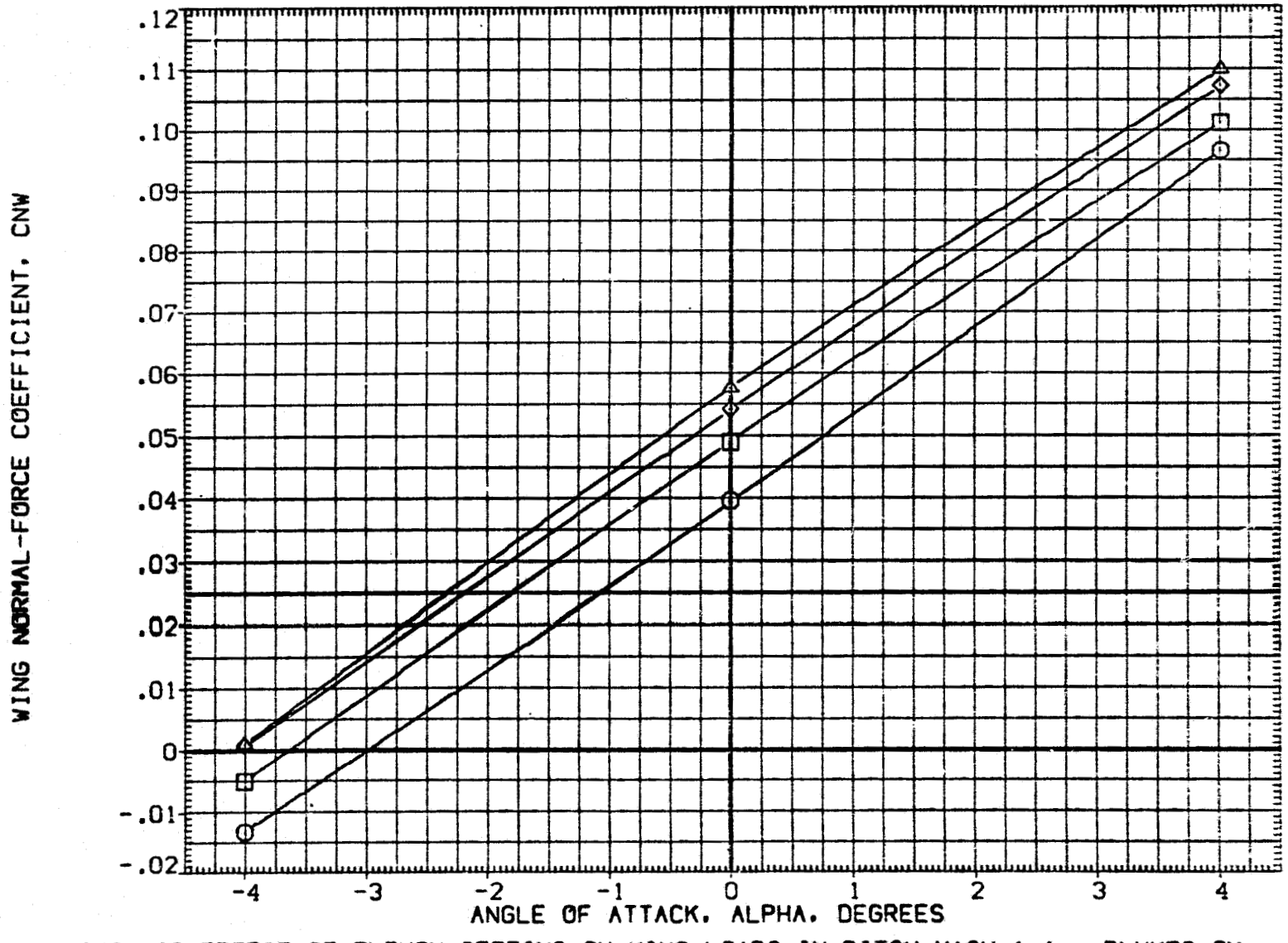



FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X22) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X89) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4X60) ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4X71) ⧖ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

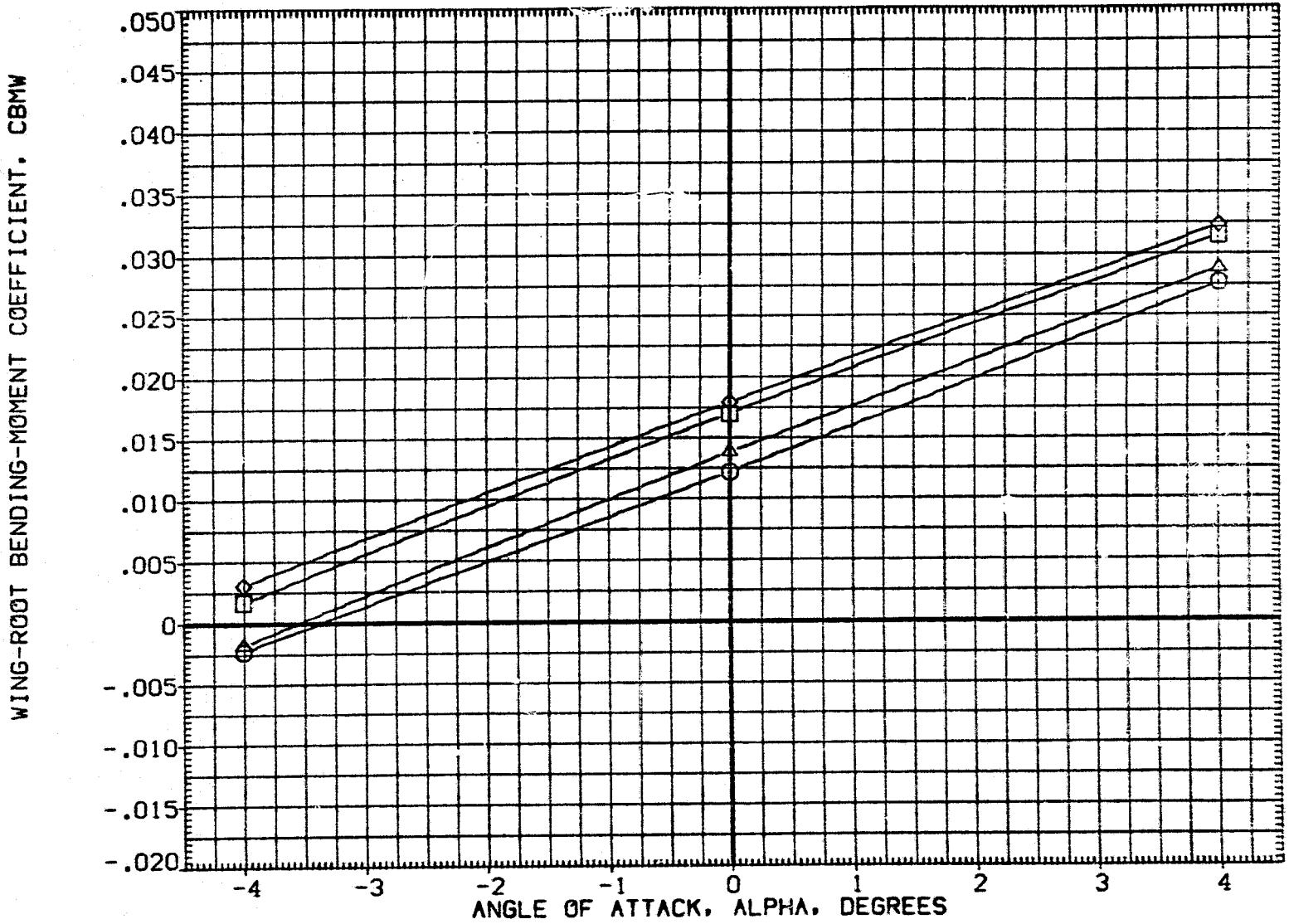



FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-1B | ELV-0B | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X89) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4X60) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4X71) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

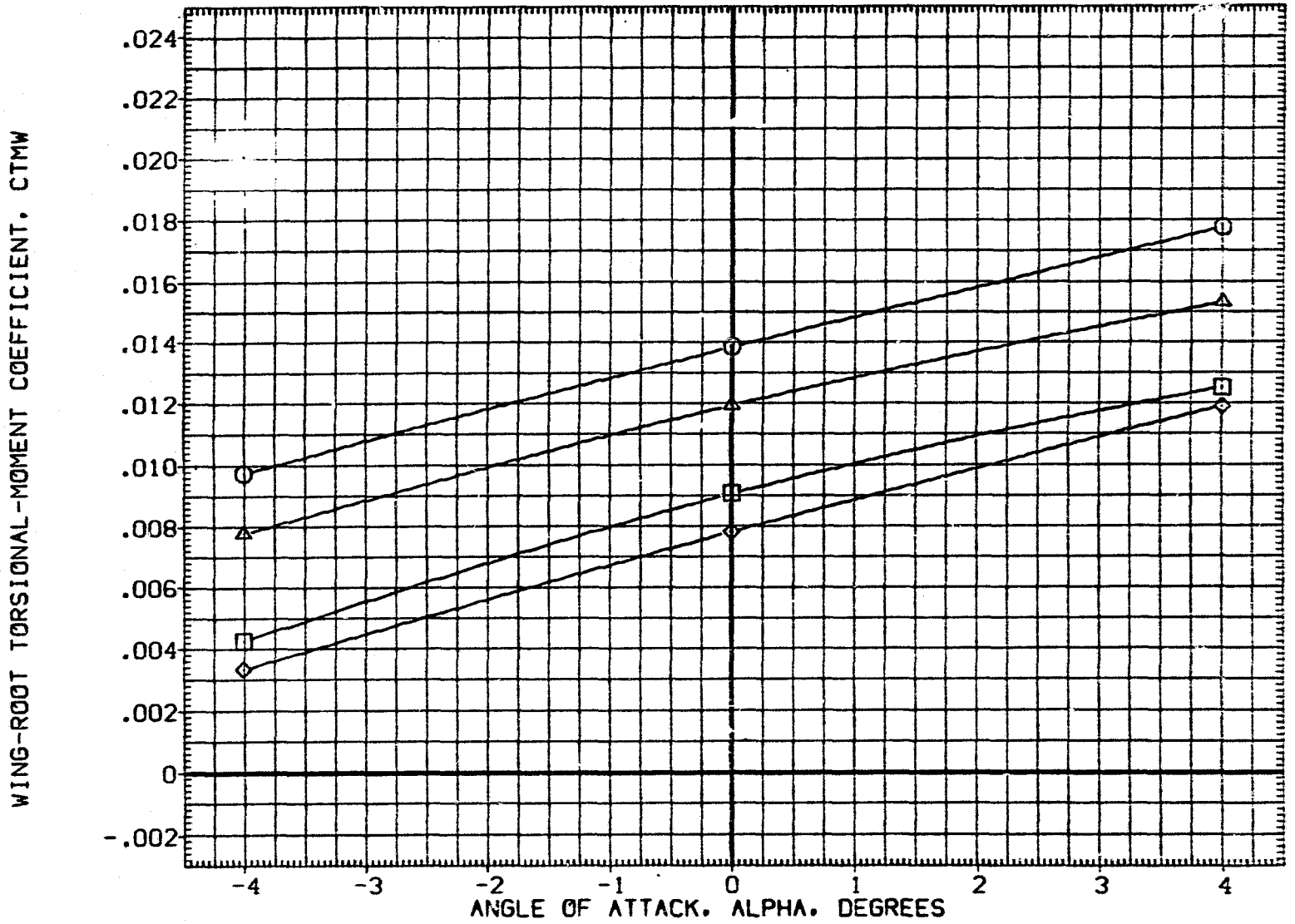



FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | ○ | ARC 11-023 IAB0 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X89) | □ | ARC 11-023 IAB0 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4X60) | ◇ | ARC 11-023 IAB0 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4X71) | △ | ARC 11-023 IAB0 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.100 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .020 | |

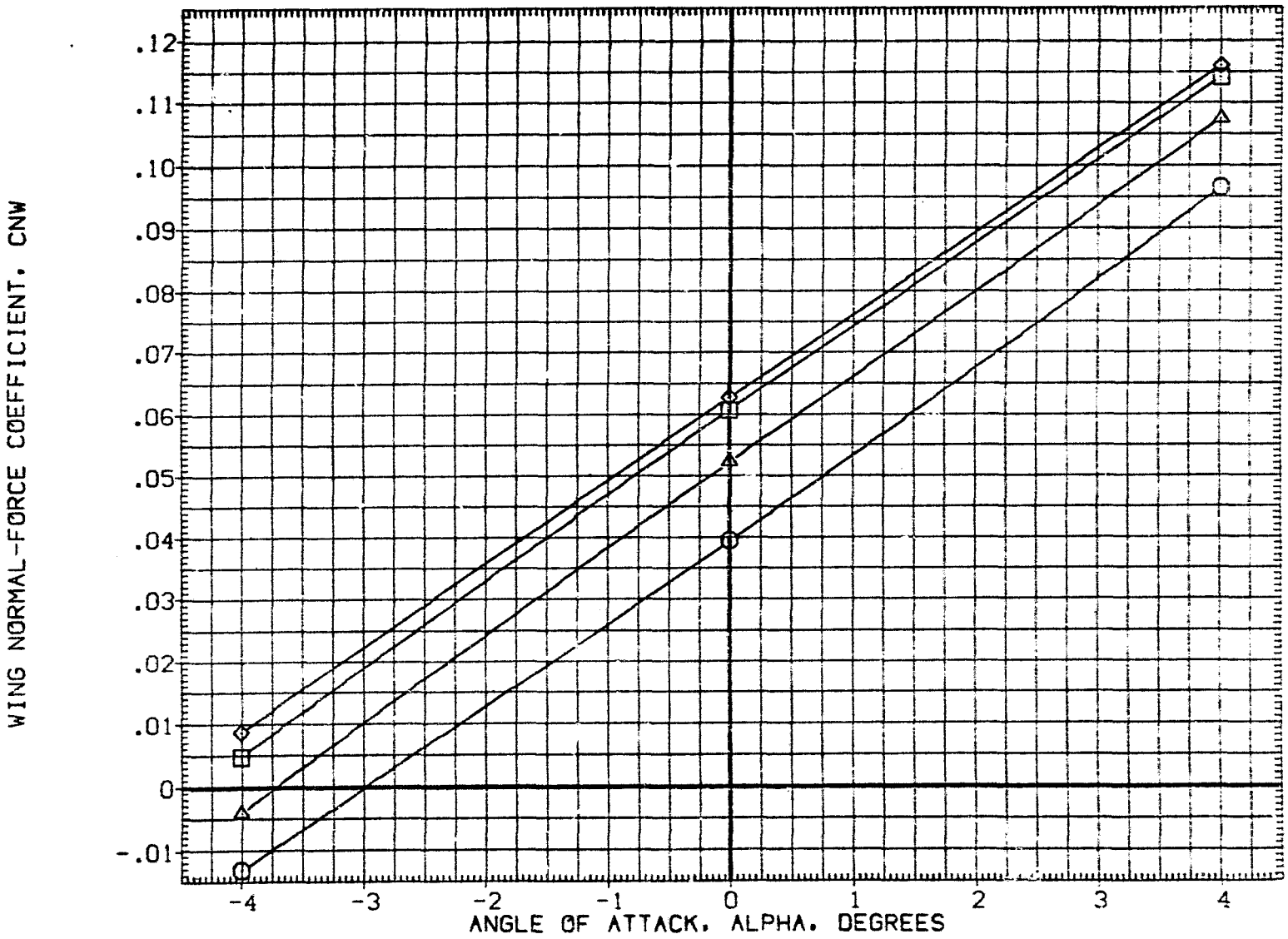



FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X23) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XA8) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4X98) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4X82) | △ | ARC 11-023 IA60 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

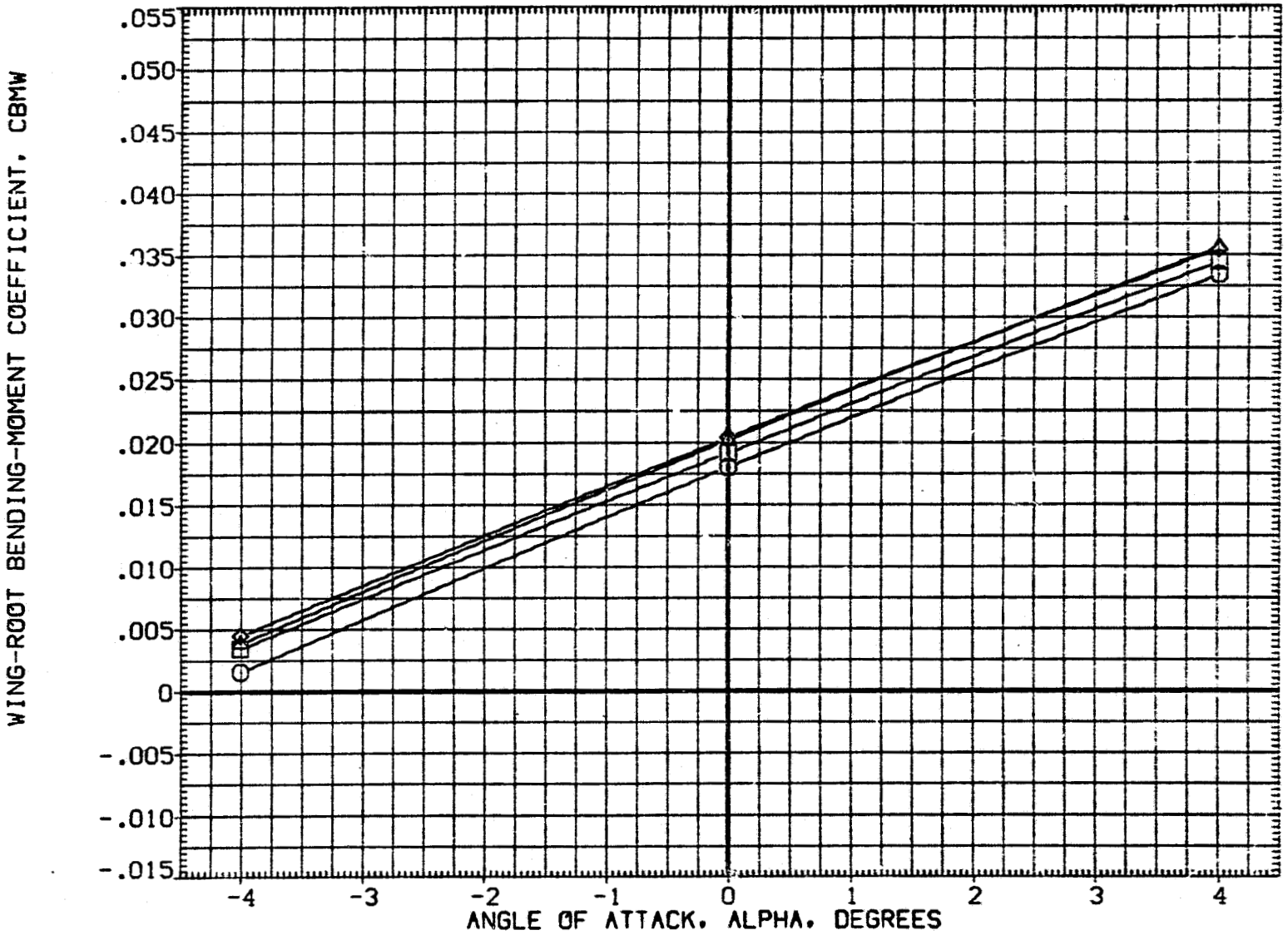



FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X23) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XA8) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4X98) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4X82) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

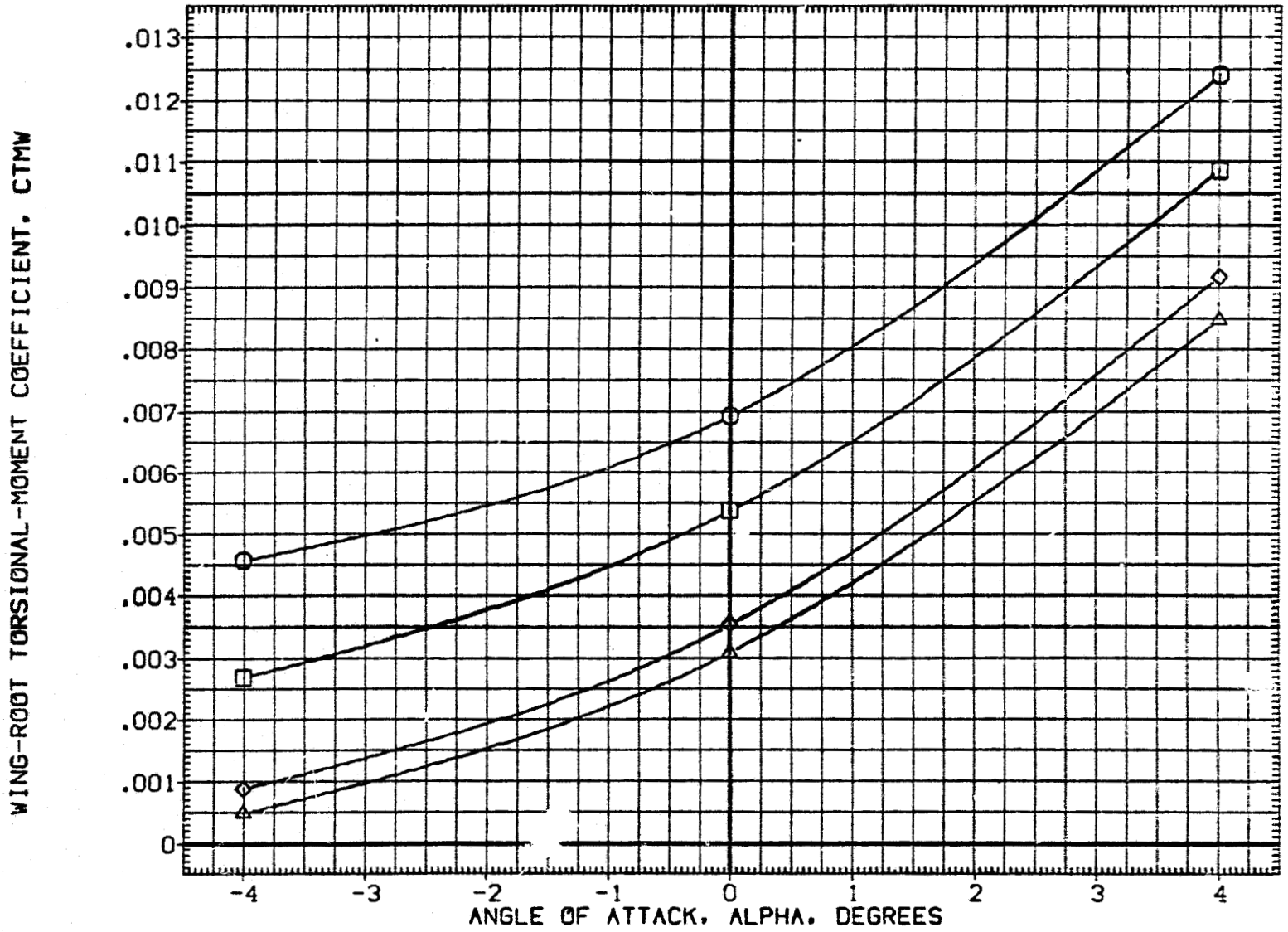



FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X23) | ○ | ARC 11-023 IA30 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XA8) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4X98) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4X82) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

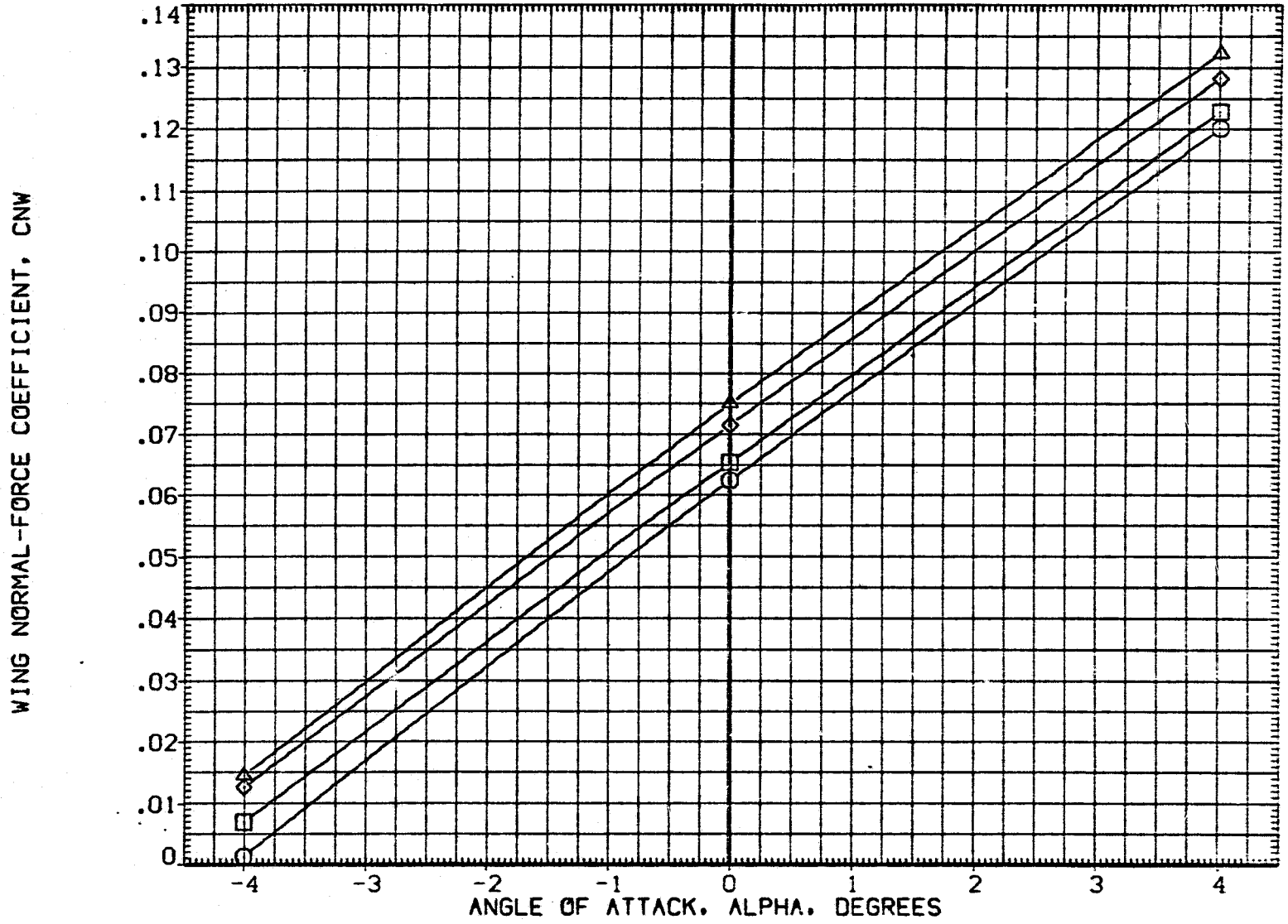



FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X23) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X61) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.250 | 4.250 |
| (RE4X72) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

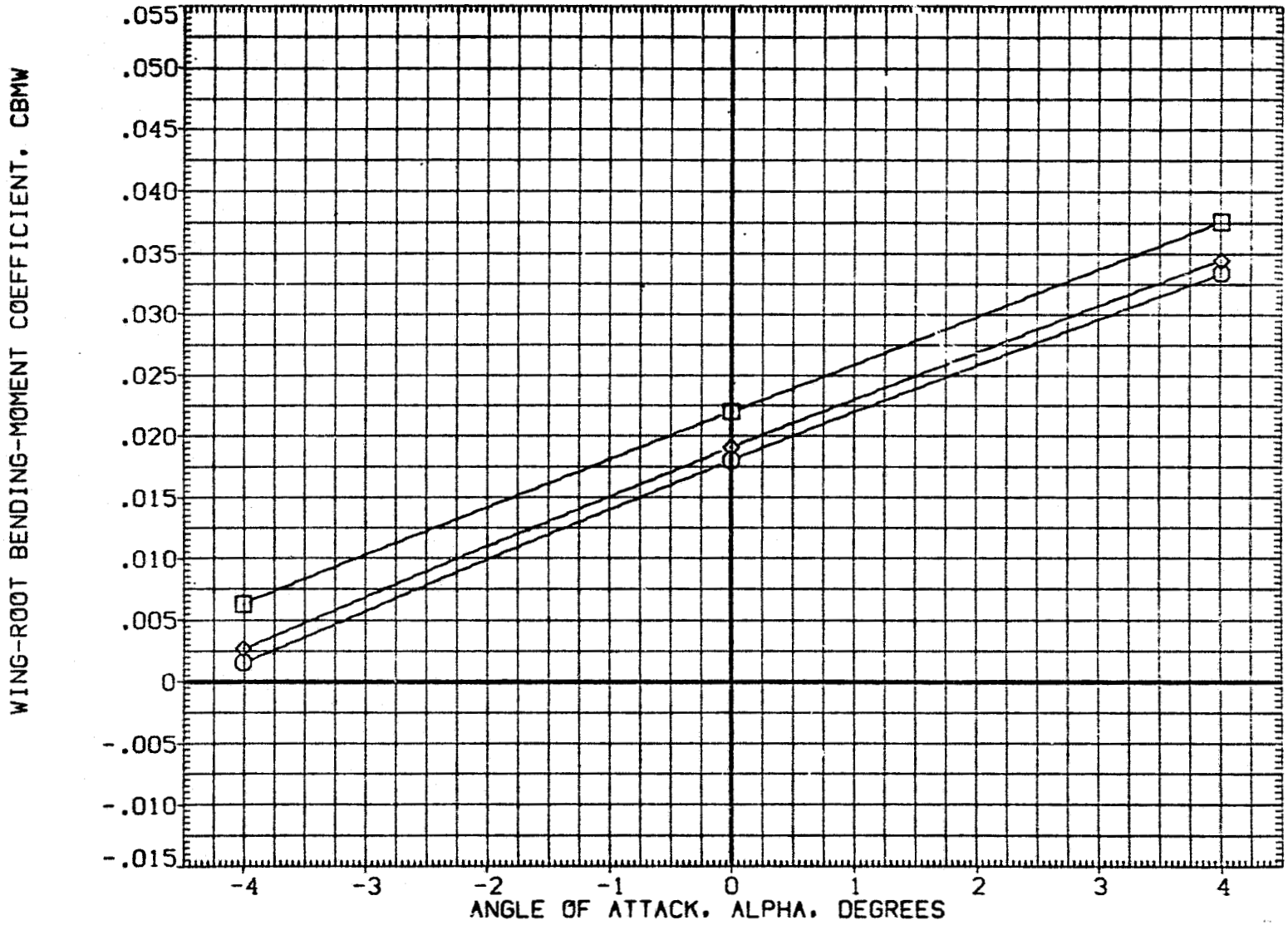



FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X23) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X61) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.250 | 4.250 |
| (RE4X72) ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

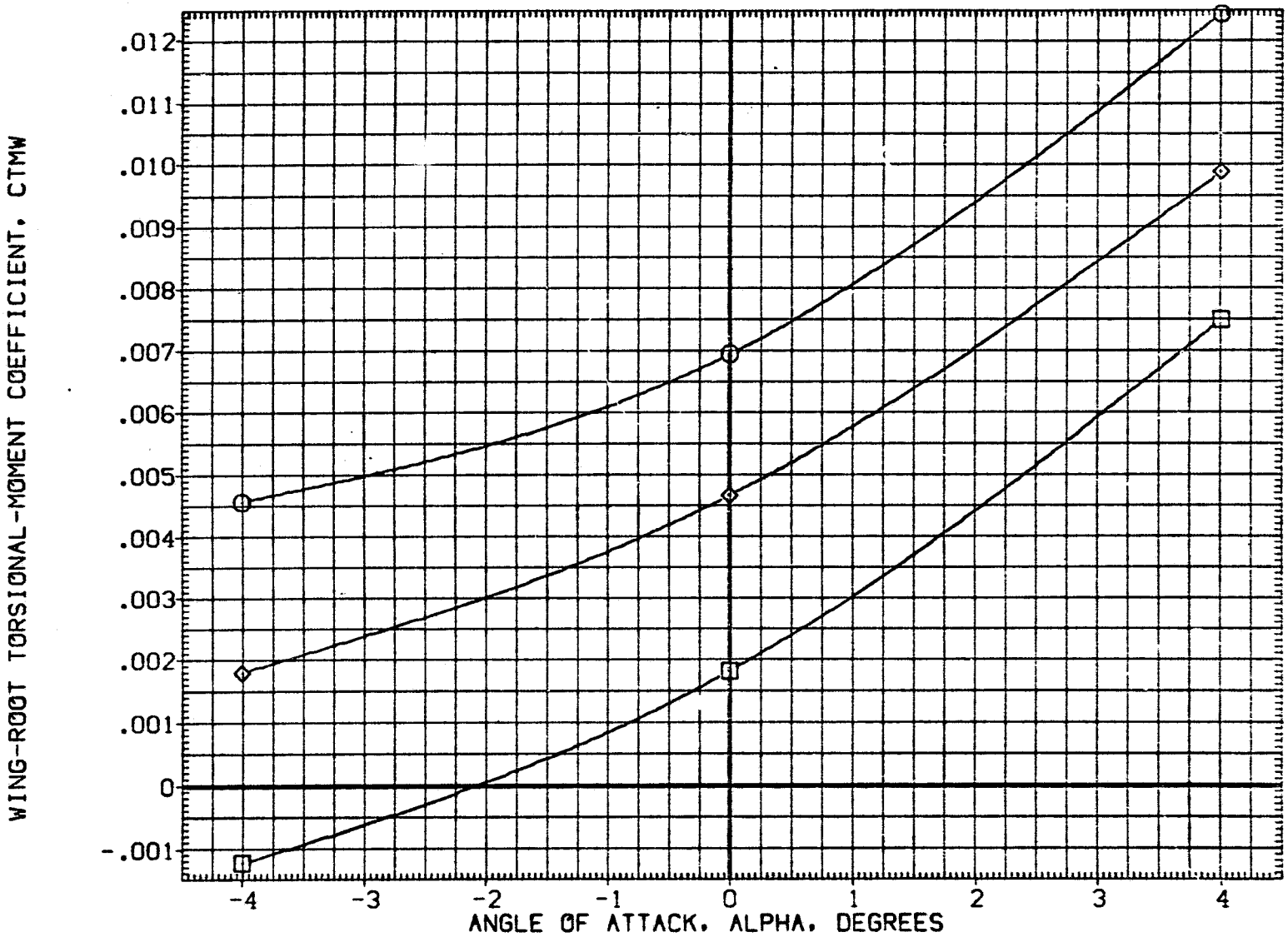



FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X23) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X61) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.250 | 4.250 |
| (RE4X72) ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

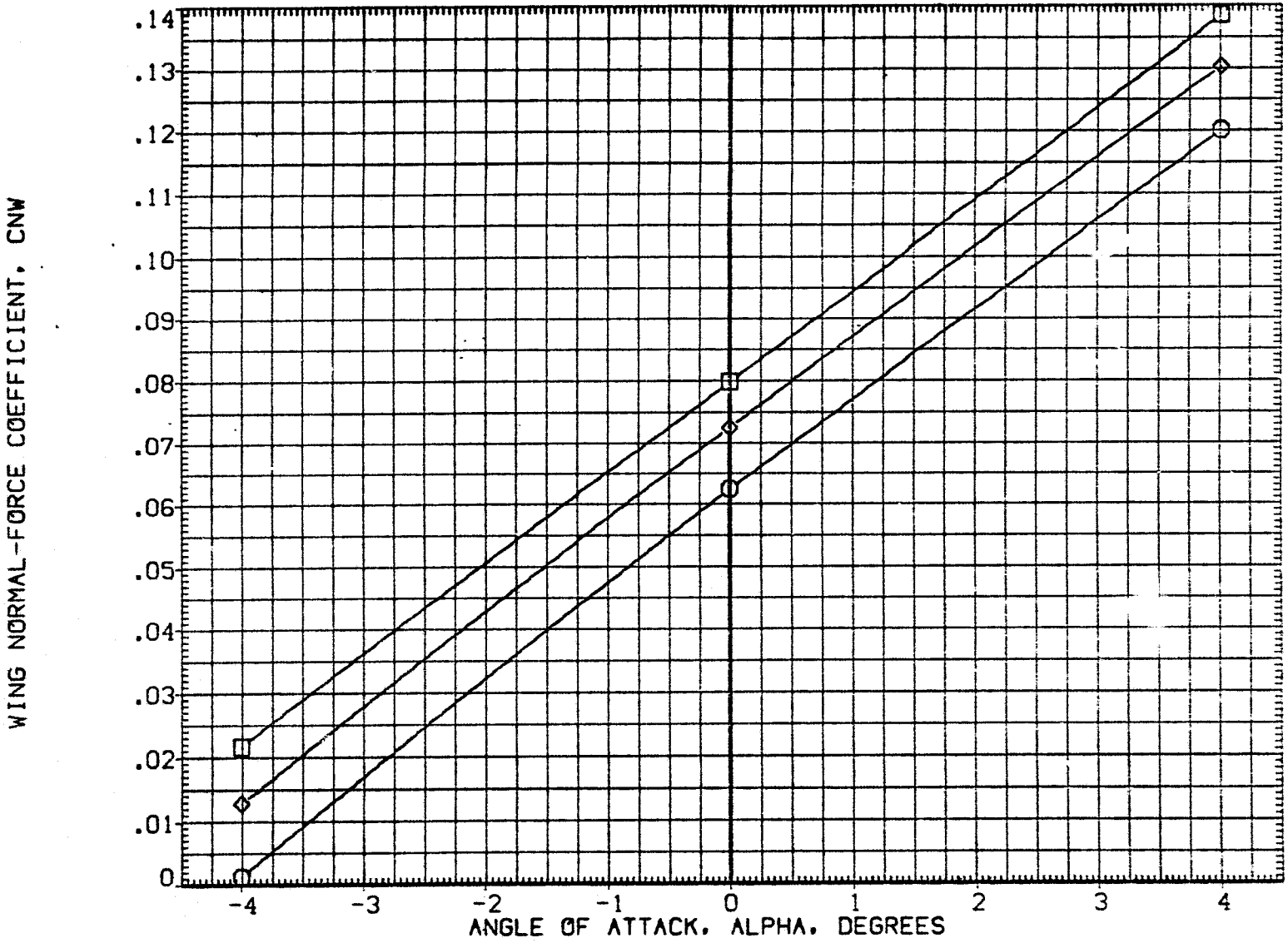



FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X24) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XA9) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4X99) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4X83) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

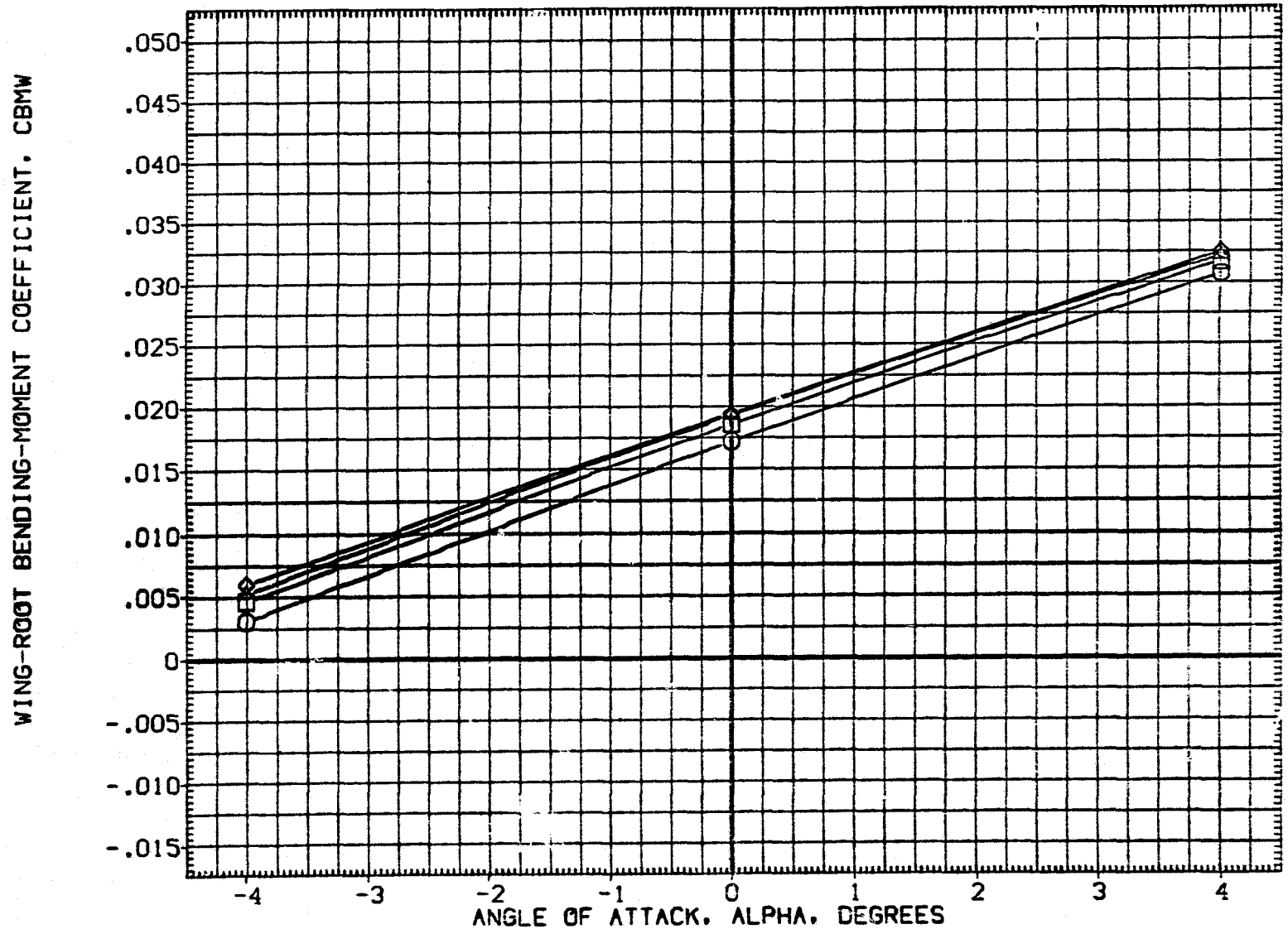



FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X24) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XA9) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4X99) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | -4.000 | 1.400 | 4.250 |
| (RE4X83) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.400 | 4.250 |

REFERENCE INFORMAT

| | | |
|---|---|---|
| SREF | 2690.0000 | |
| LREF | 1290.3000 | |
| BREF | 1290.3000 | |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

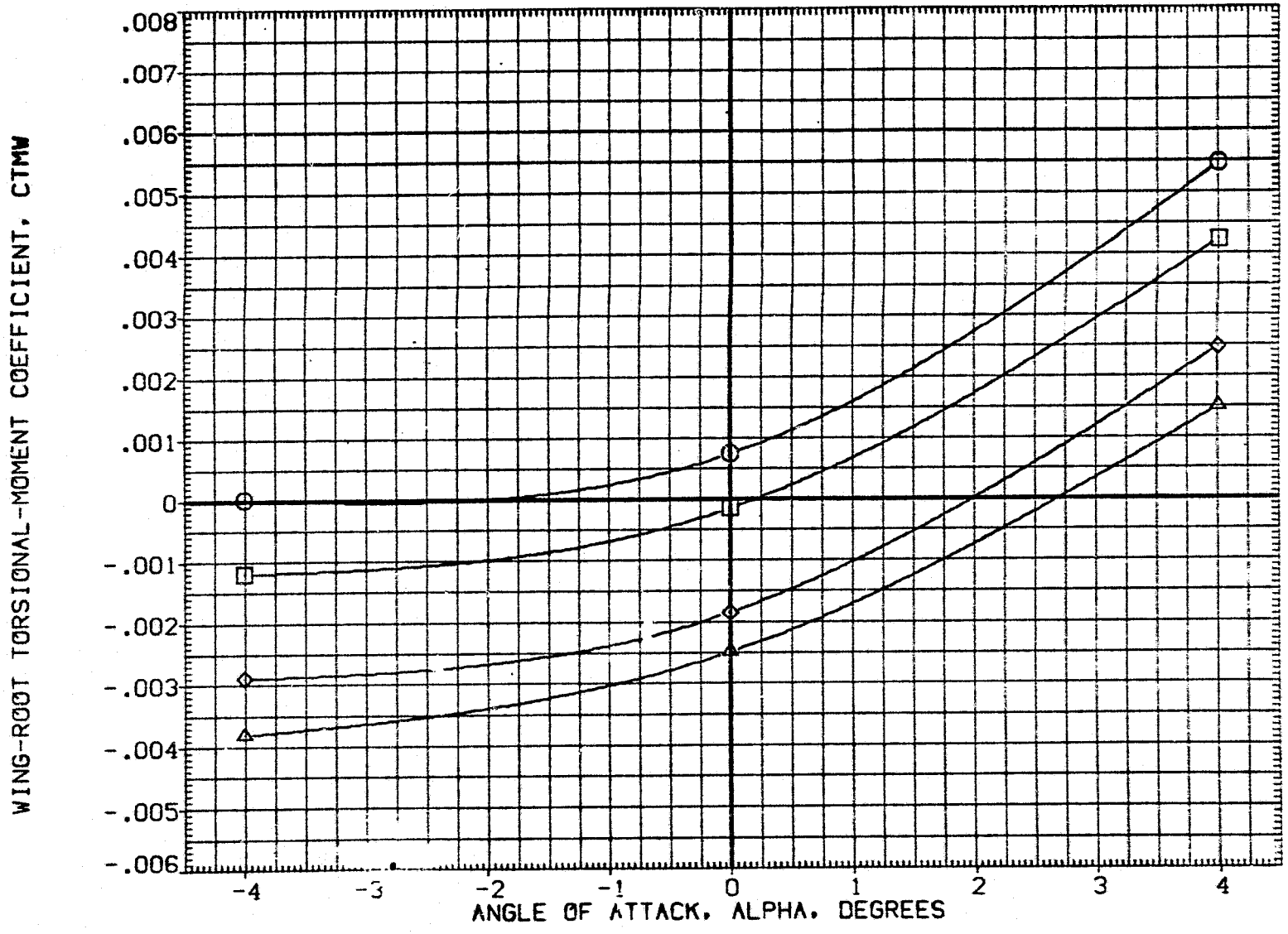



FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X24) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XA9) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4X99) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4X83) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

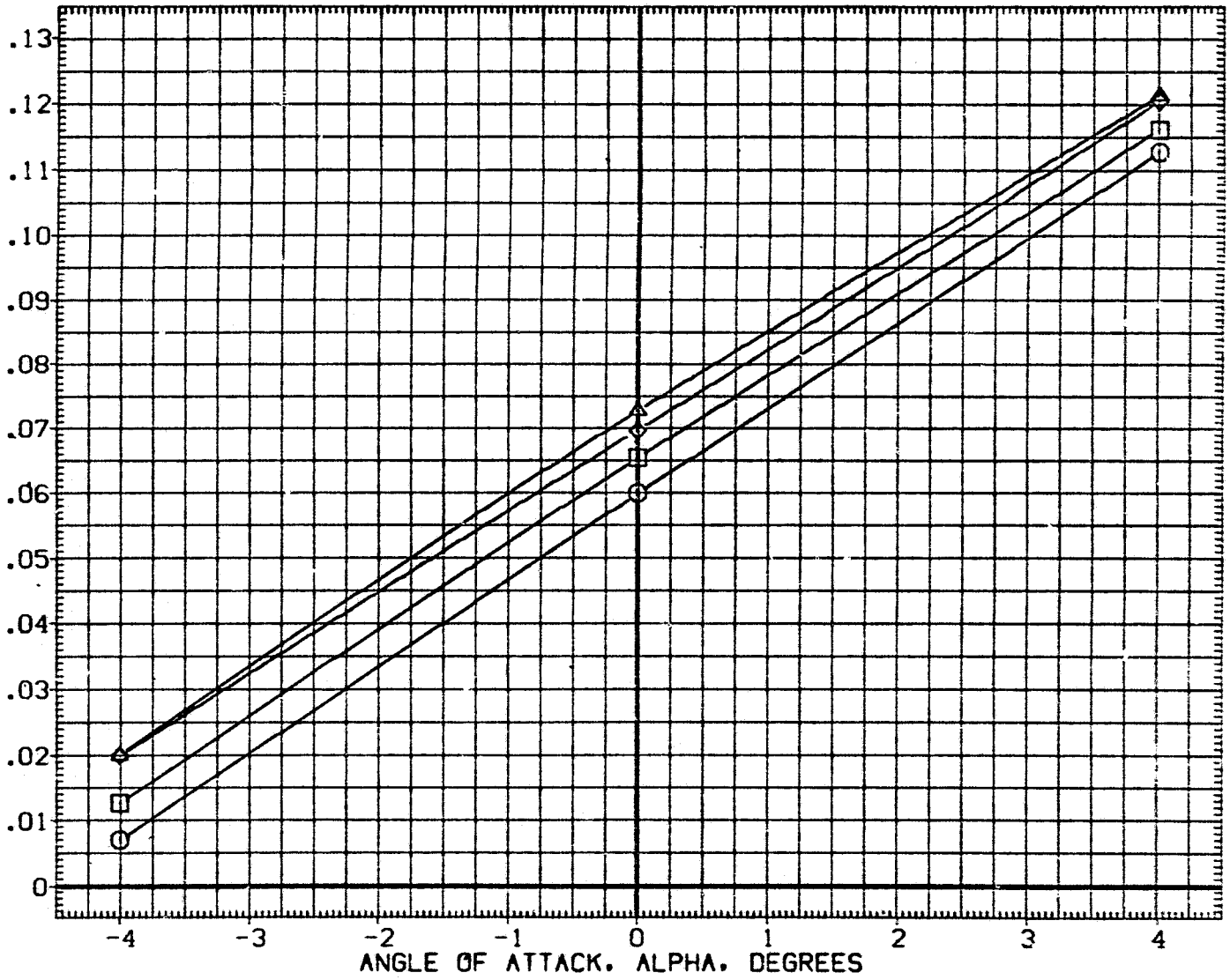



FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X24) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X62) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

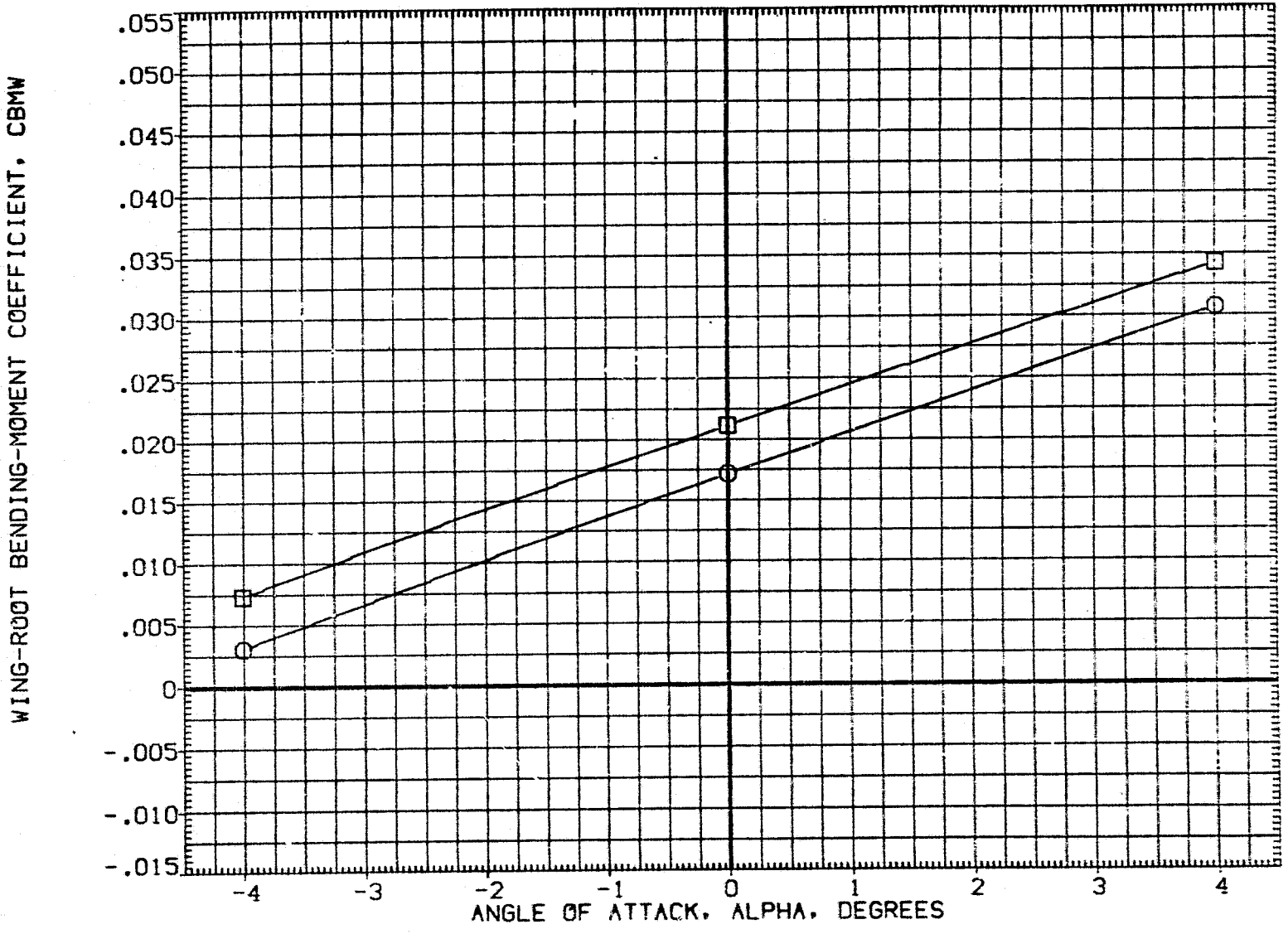



FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X24) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X62) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

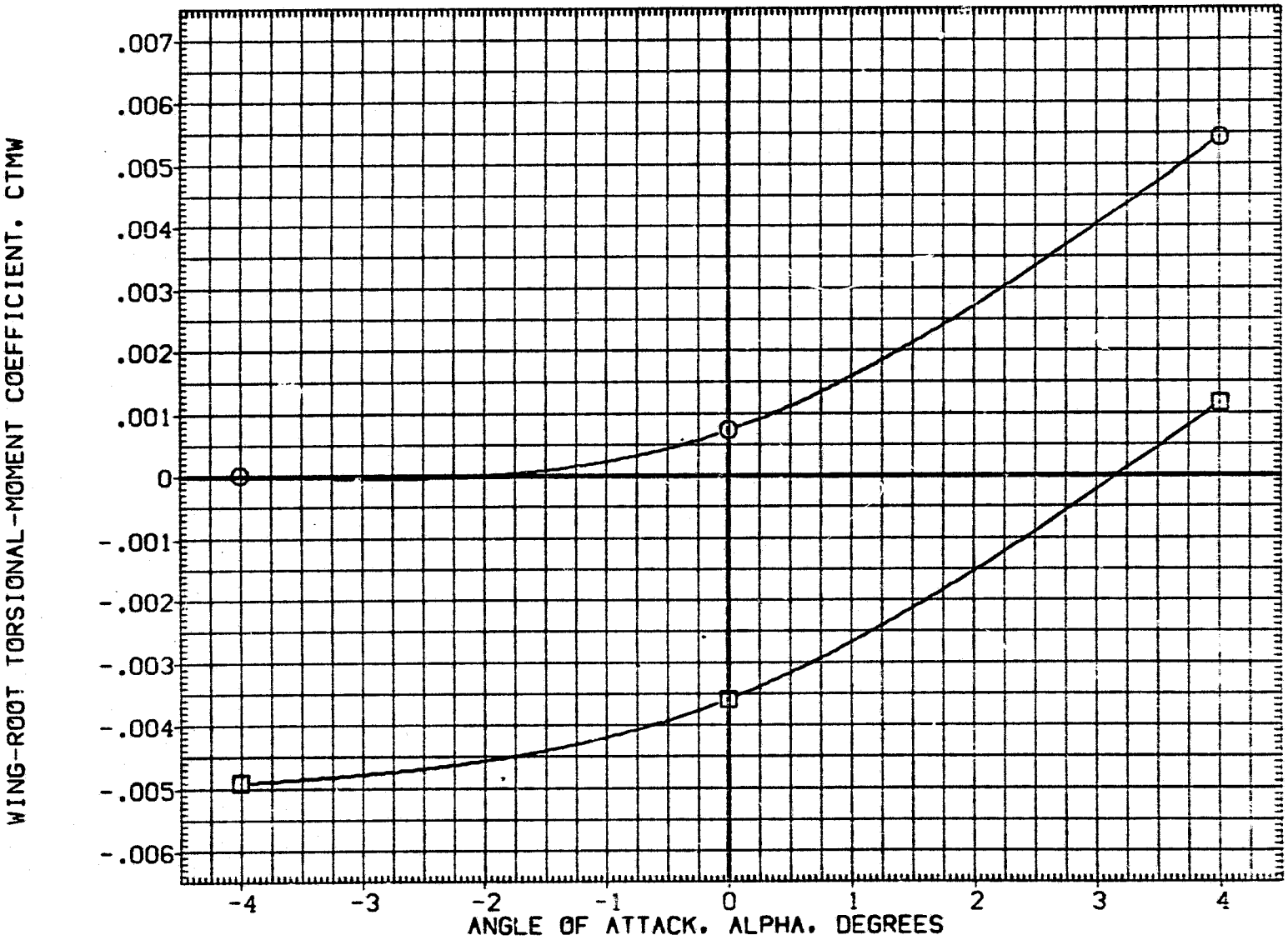



FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X24) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X62) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.400 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

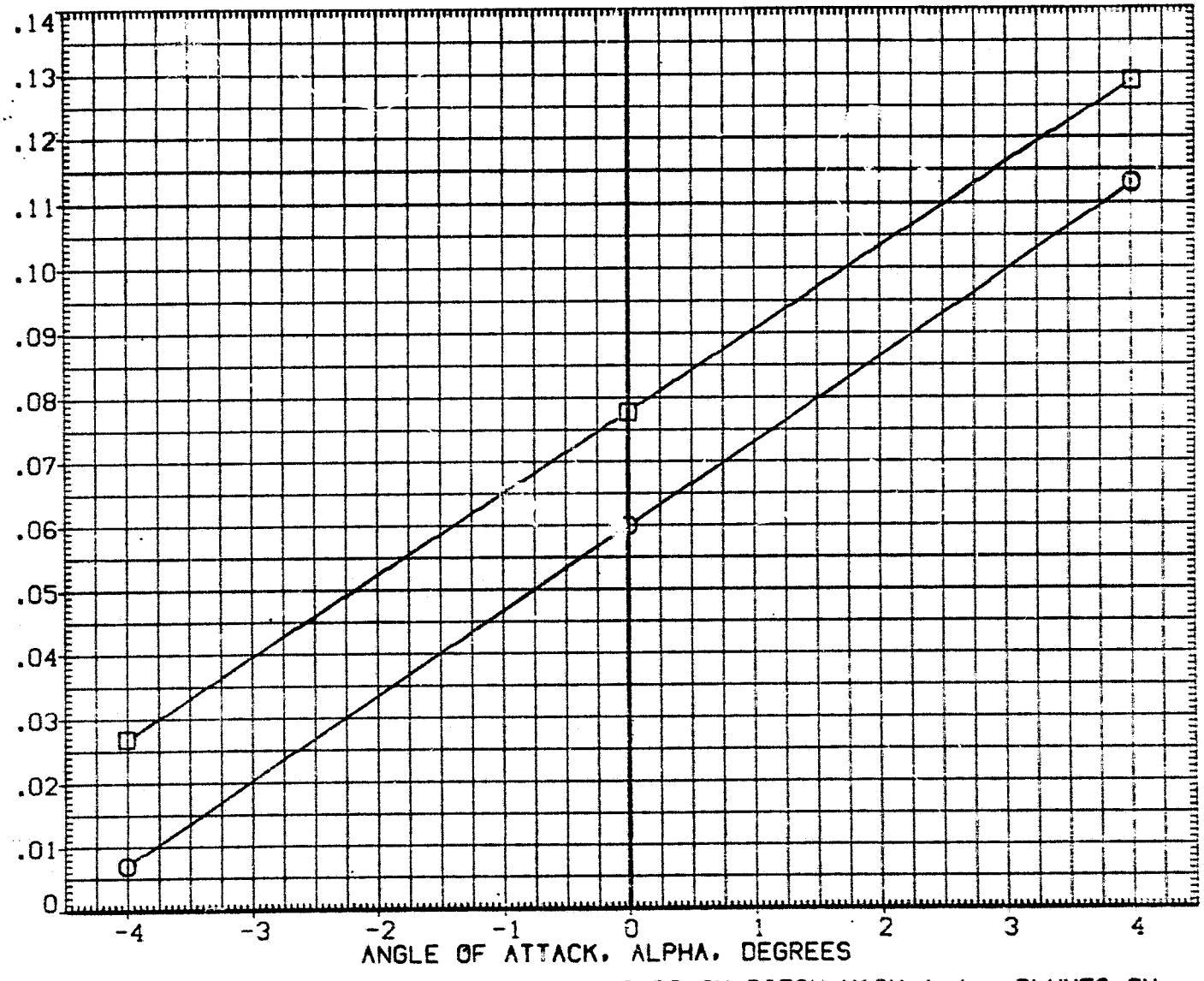



FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4XA5) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .600 | 3.400 |
| (RE4X95) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4X79) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

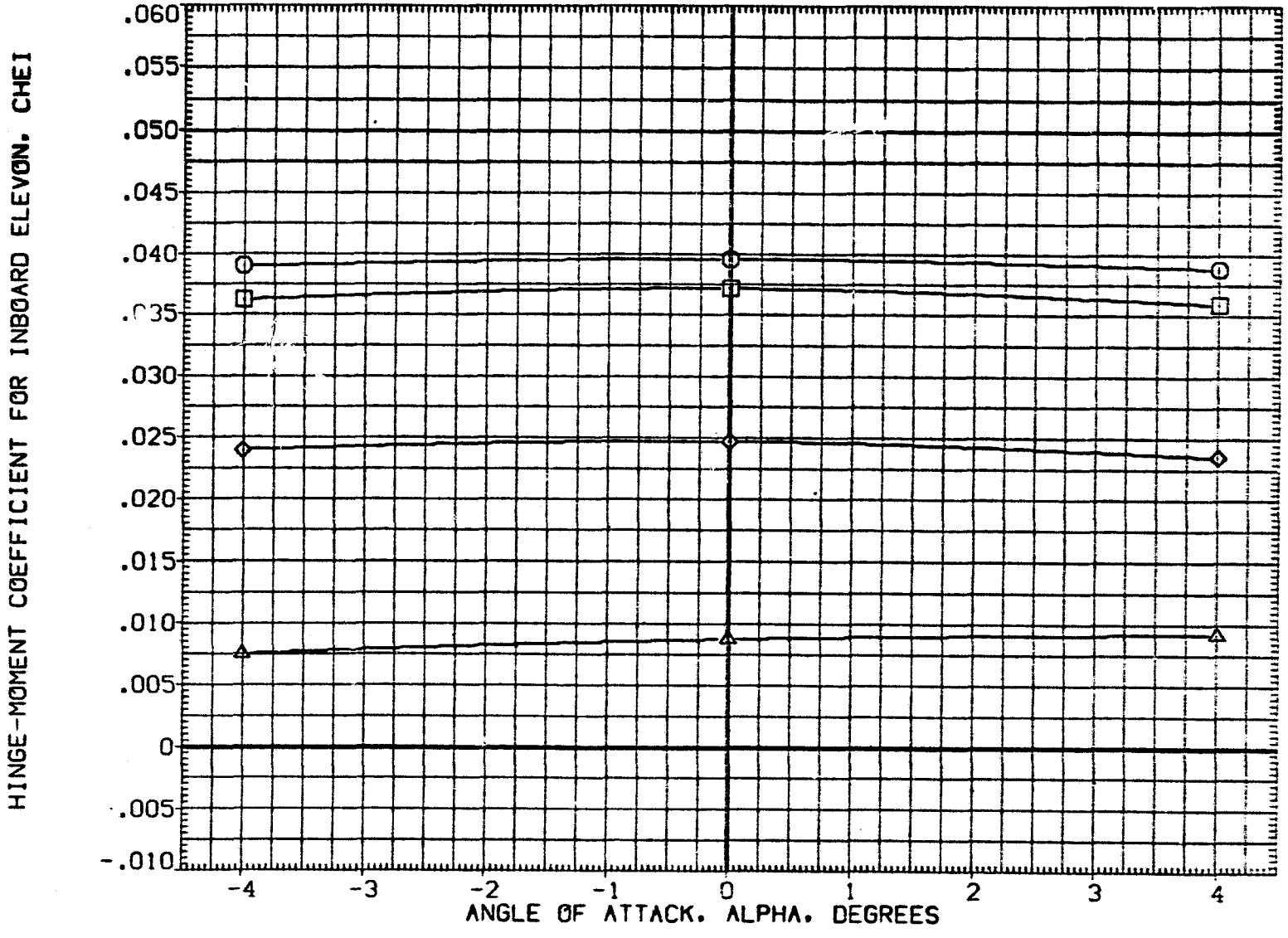



FIG. 29 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.6 PLUME ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X20) | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4XA5) | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .600 | 3.400 |
| (RE4X95) | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4X79) | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

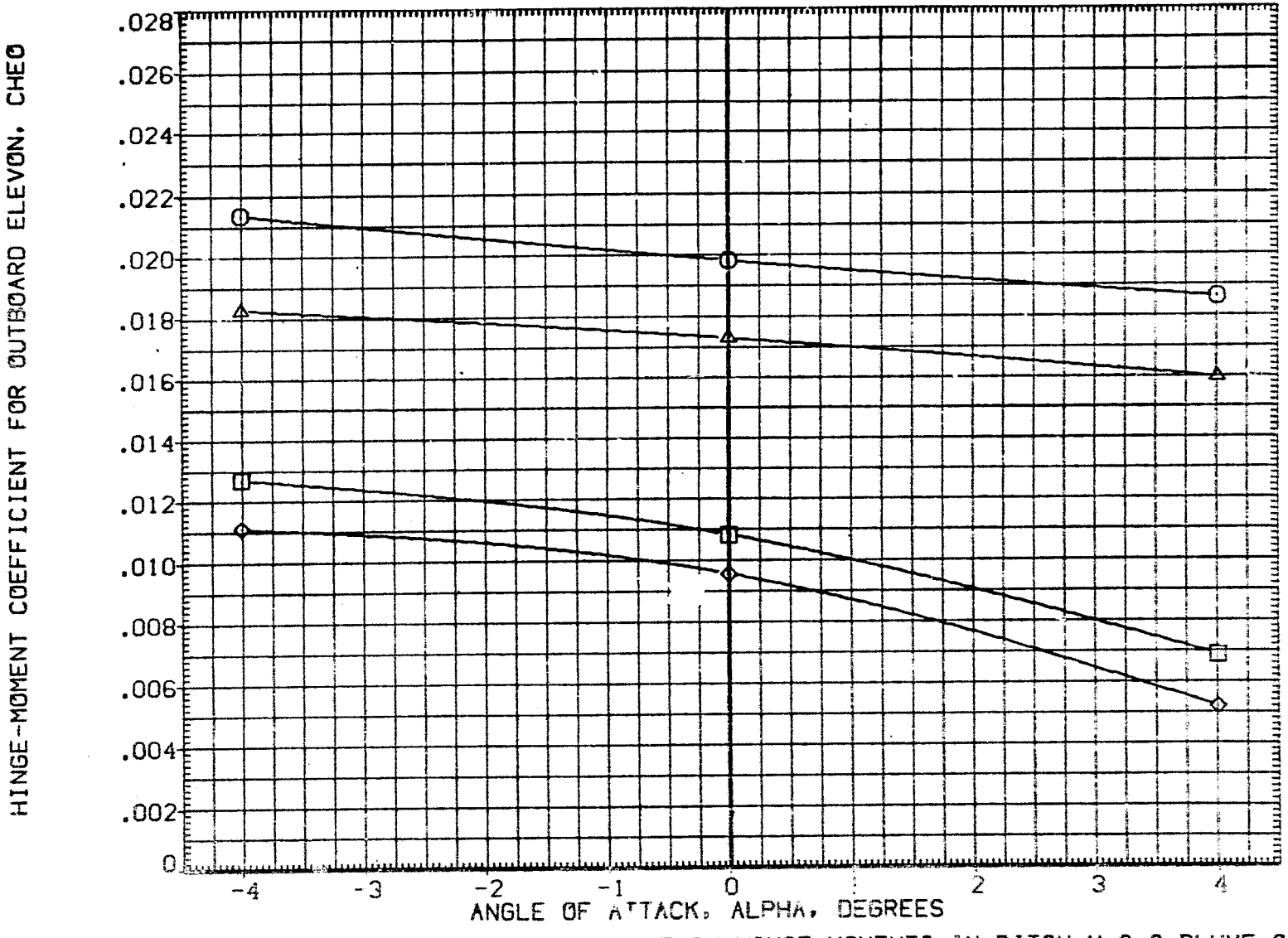



FIG. 29 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.6 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X87) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4X58) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4X69) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

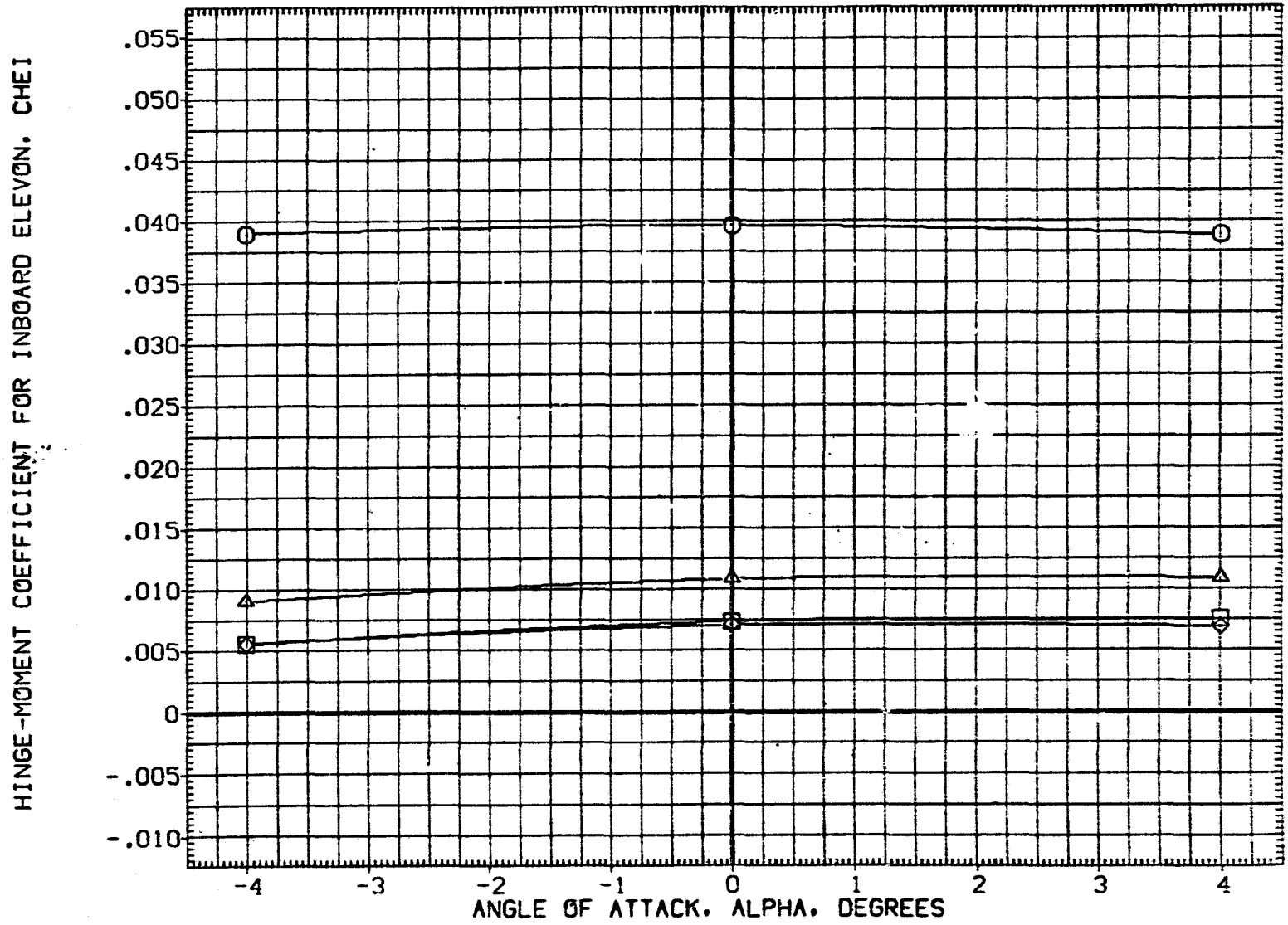



FIG. 29 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.6 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X67) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4X58) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4X69) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

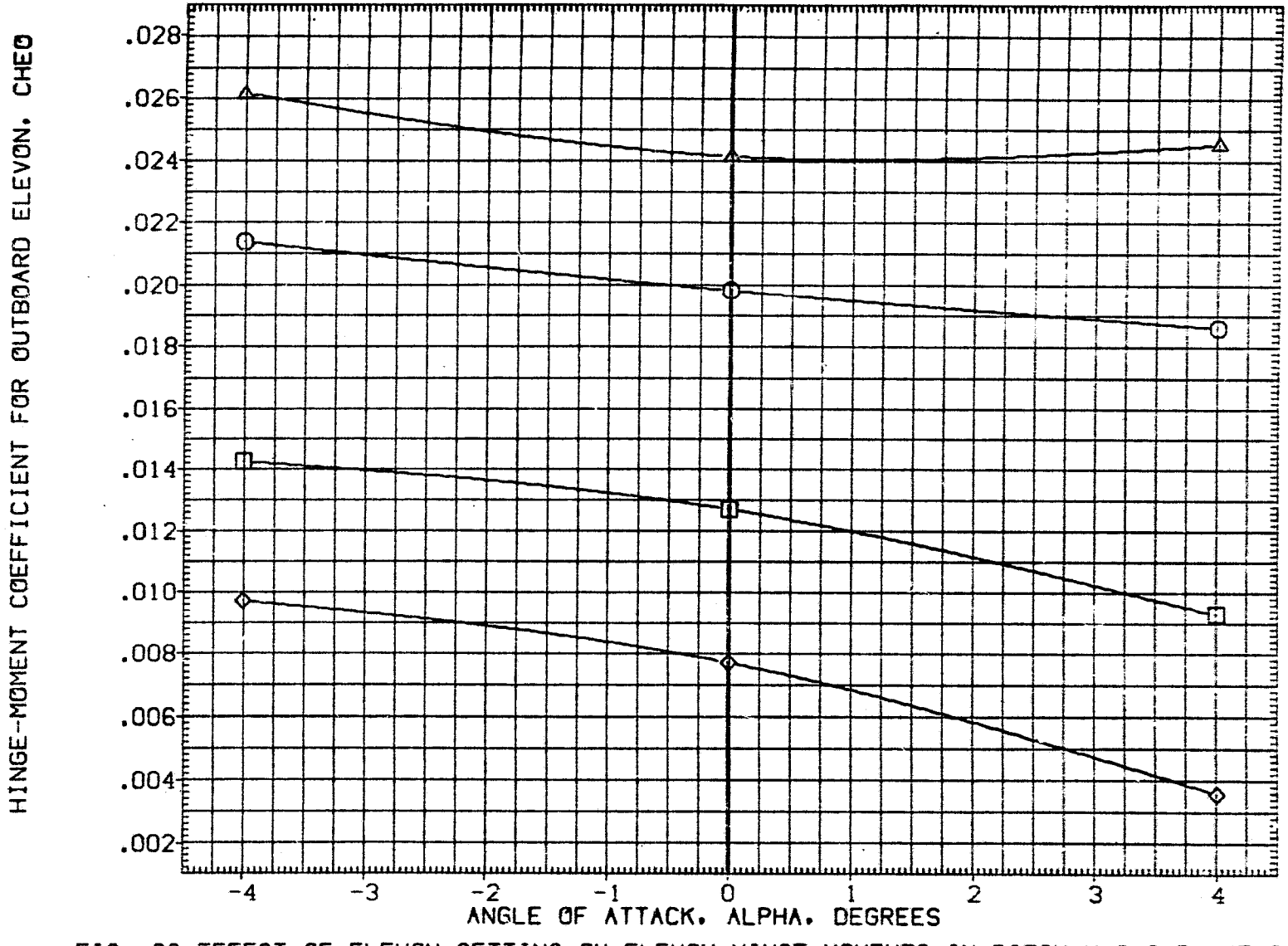



FIG. 29 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.6 PLUME ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X21) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4XA6) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .900 | 4.250 |
| (RE4X96) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4X80) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

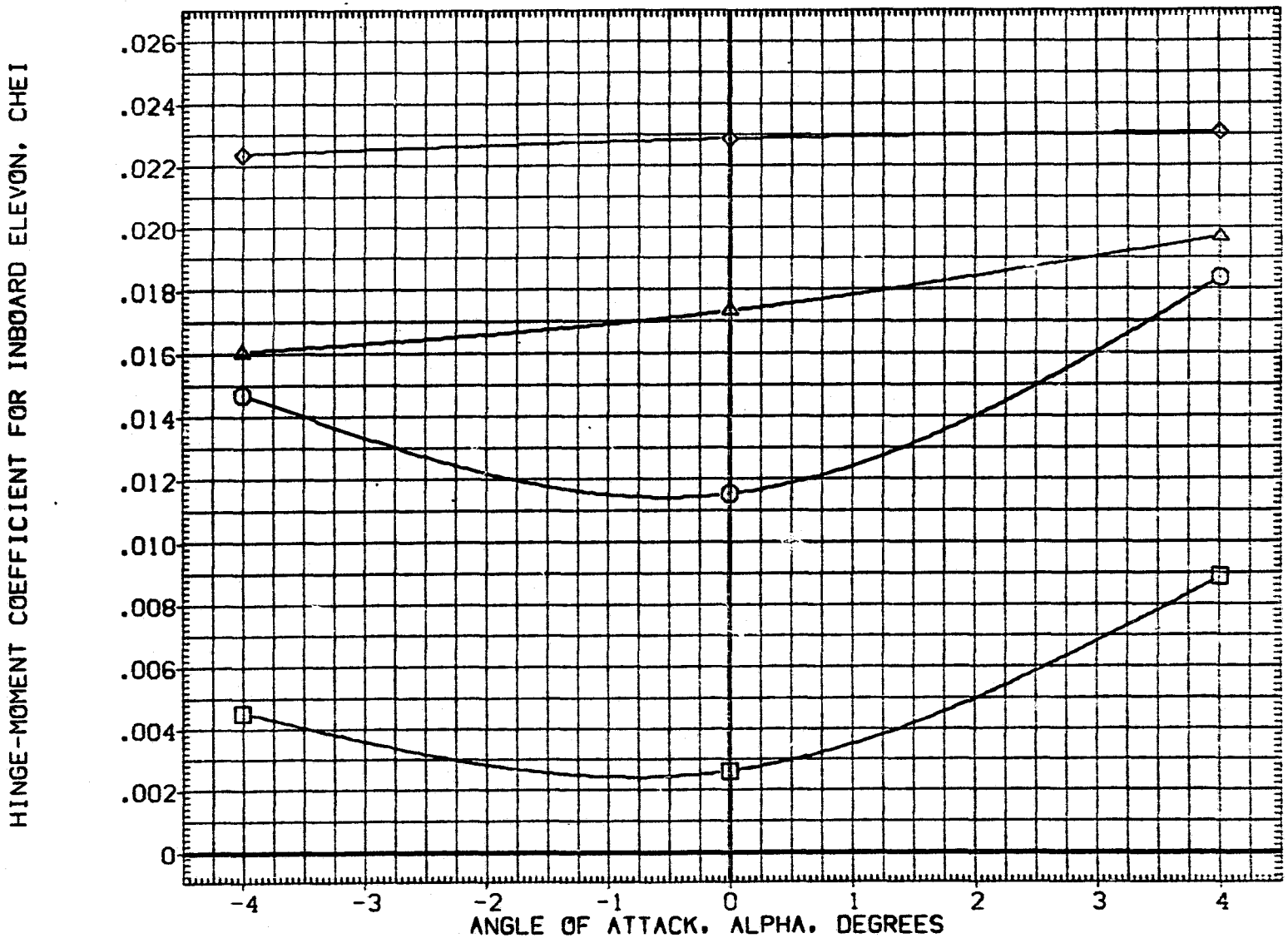



FIG. 30 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.9 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4XA6) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .900 | 4.250 |
| (RE4X96) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4X80) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

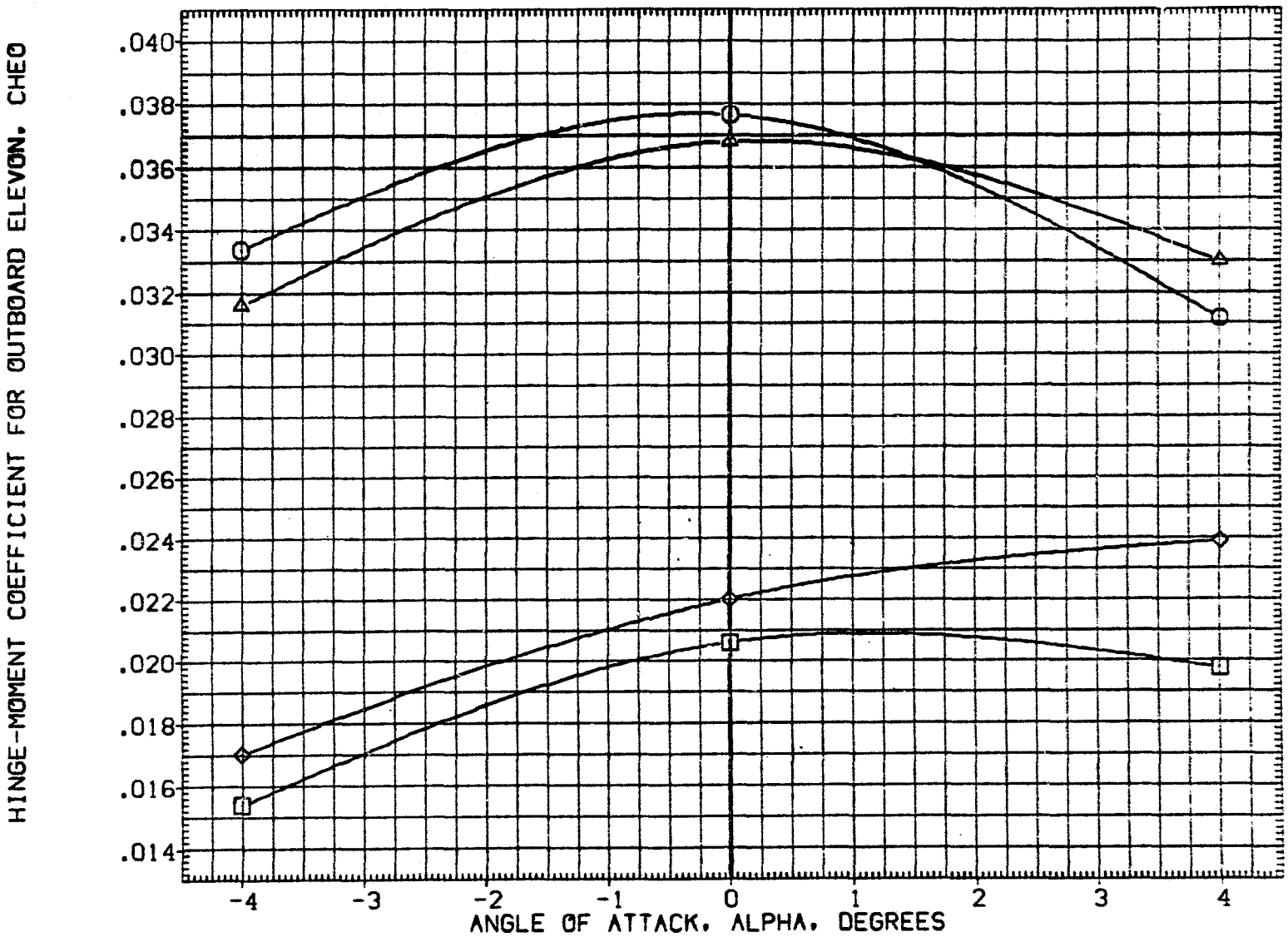



FIG. 30 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.9 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X88) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 8.000 | .900 | 4.250 |
| (RE4X59) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X70) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

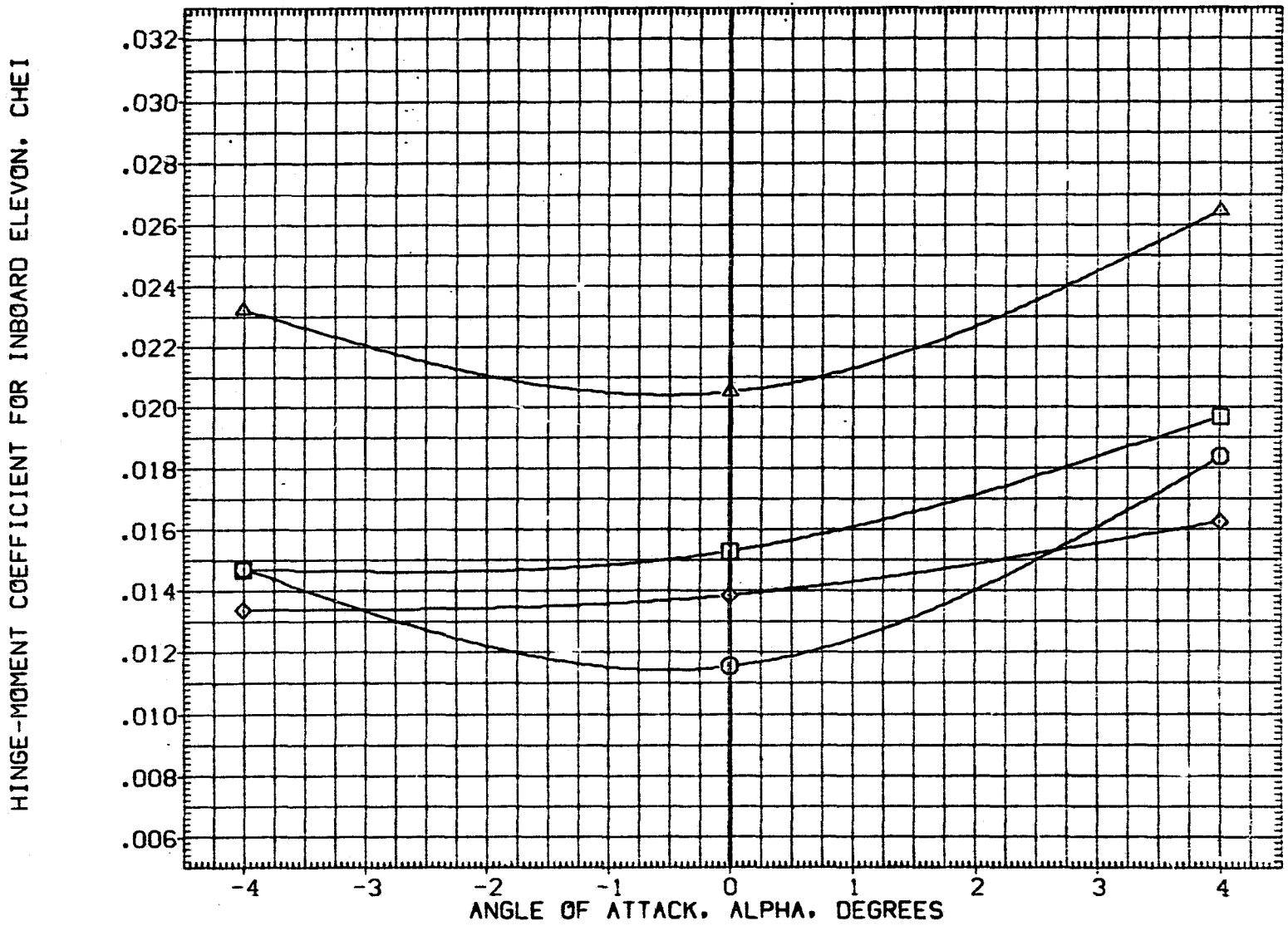



FIG. 30 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.9 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X88) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4X59) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4X70) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

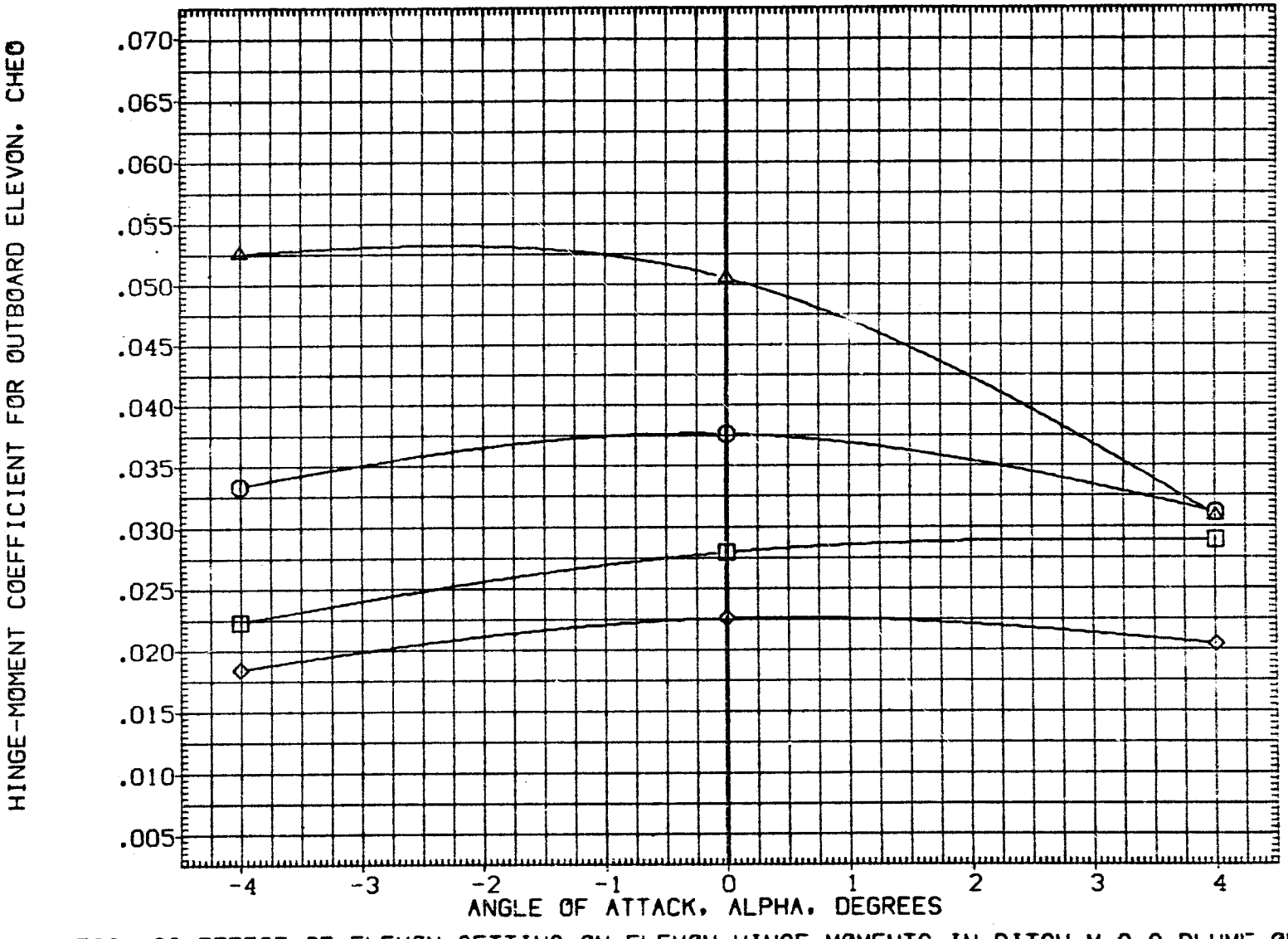



FIG. 30 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.9 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XA7) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4X97) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4X81) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

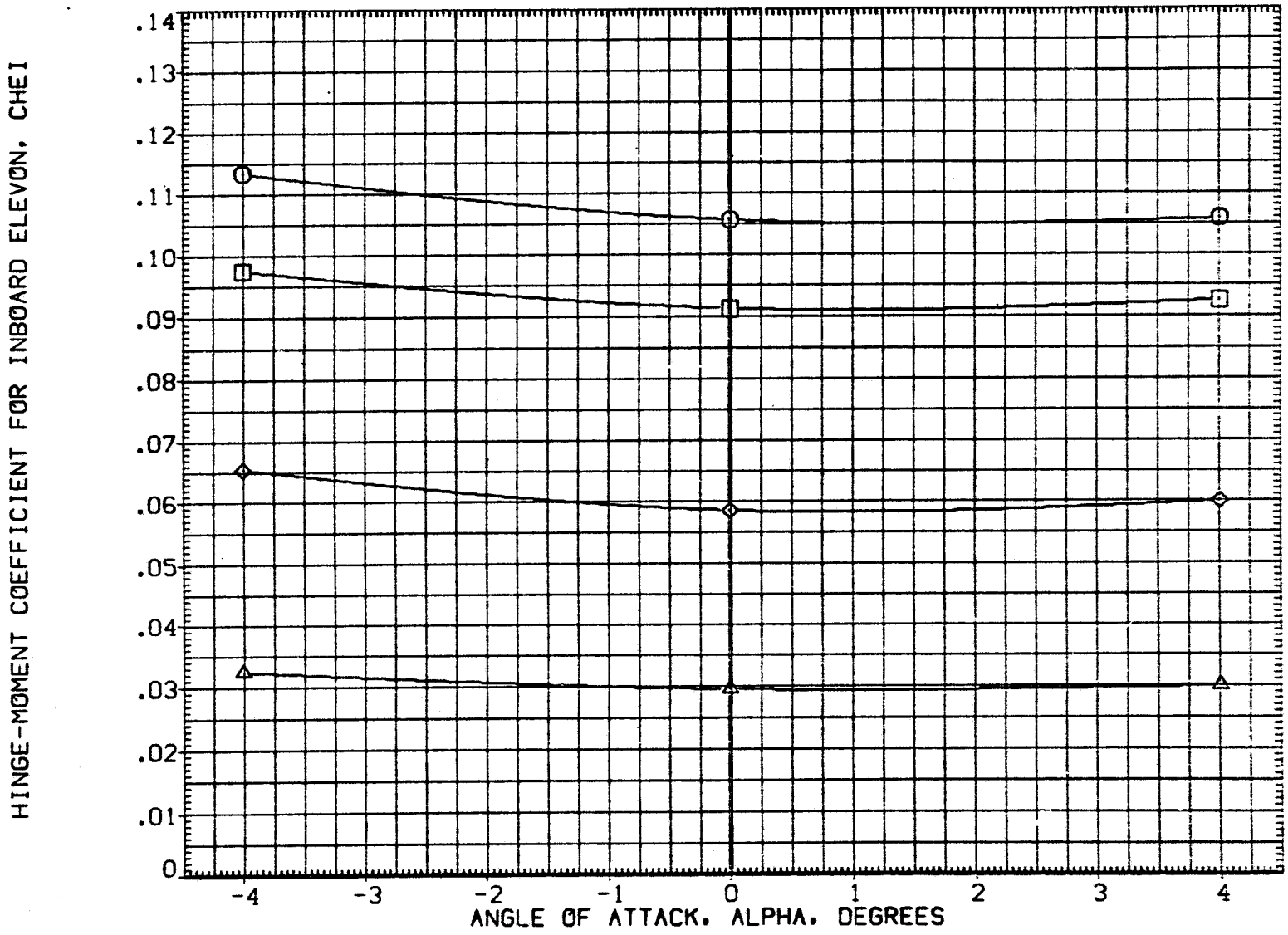



FIG. 31 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.1 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XA7) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4X97) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4X81) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

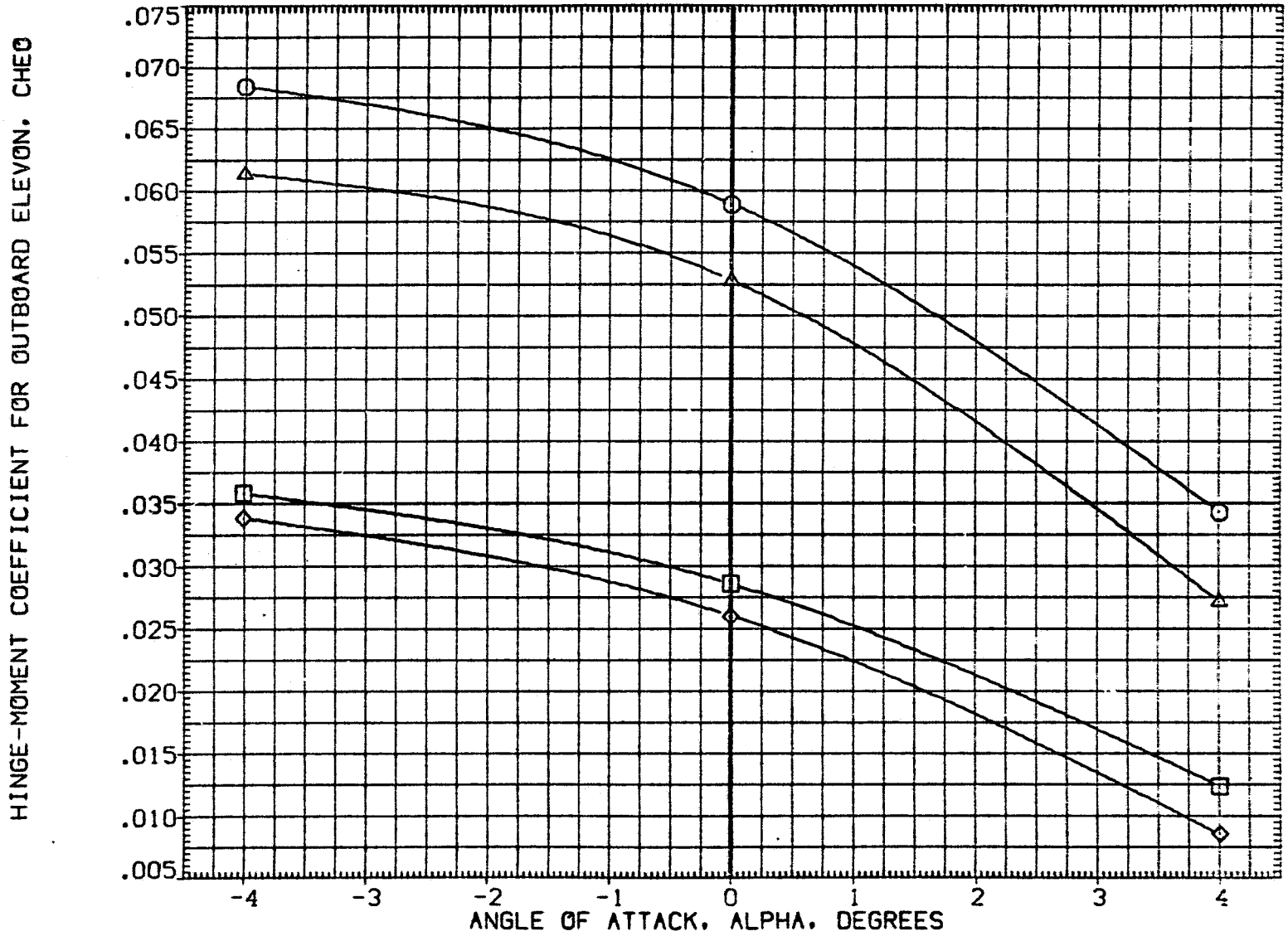



FIG. 31 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.1 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X89) | ◫ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4X60) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4X71) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

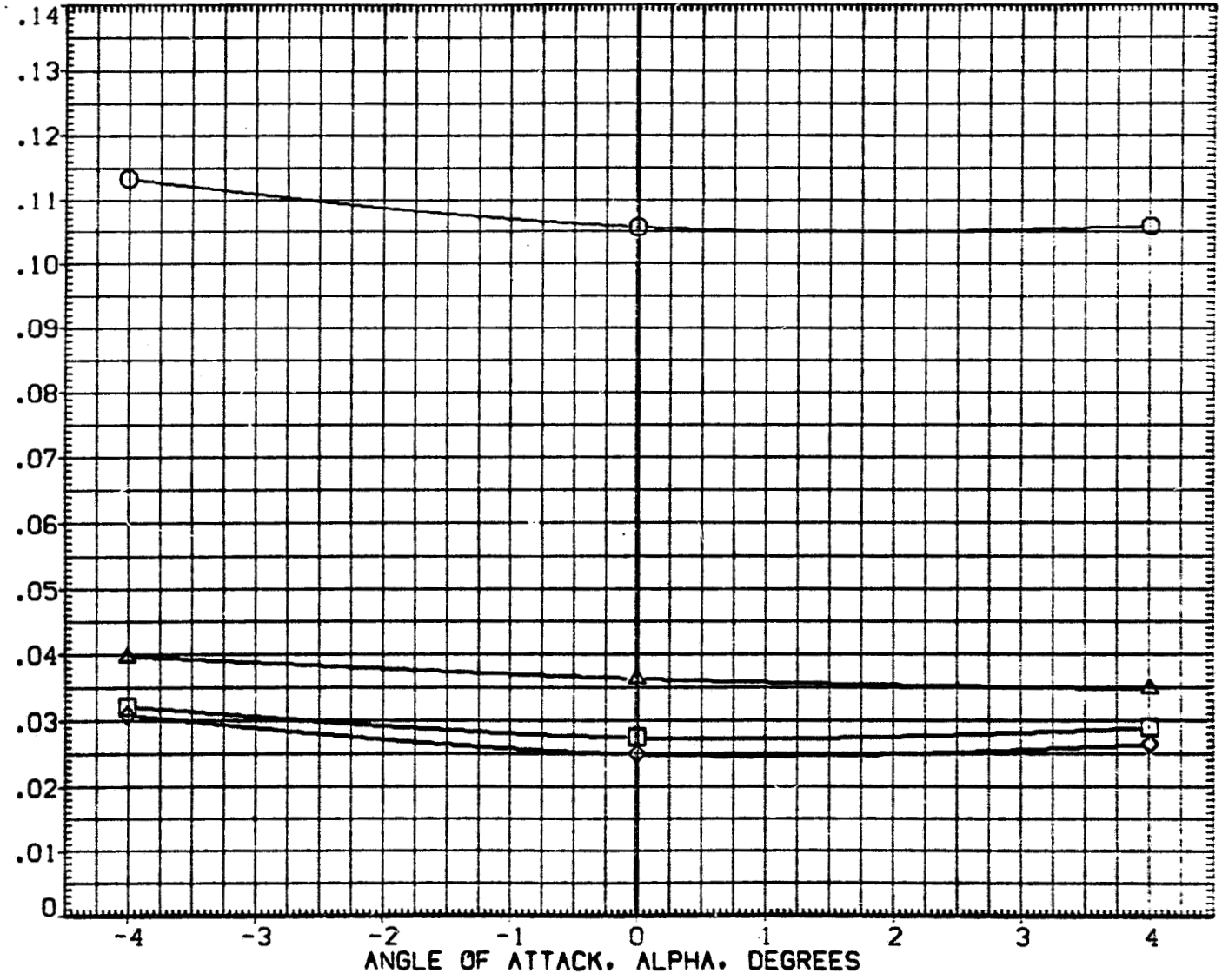



FIG. 31 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH,M=1.1 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X89) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4X60) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4X71) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

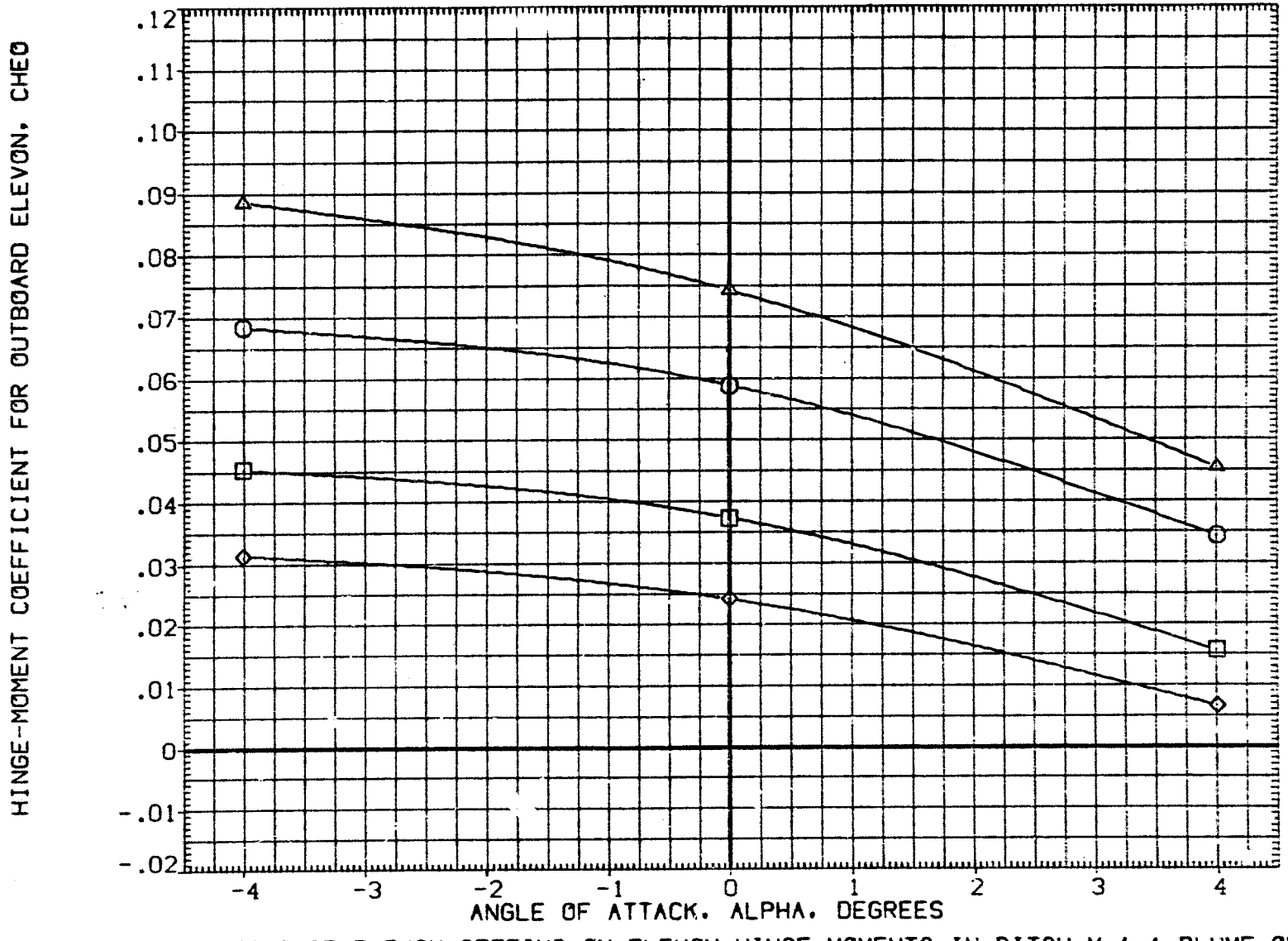



FIG. 31 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.1 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X23) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XAB) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4X98) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4X82) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

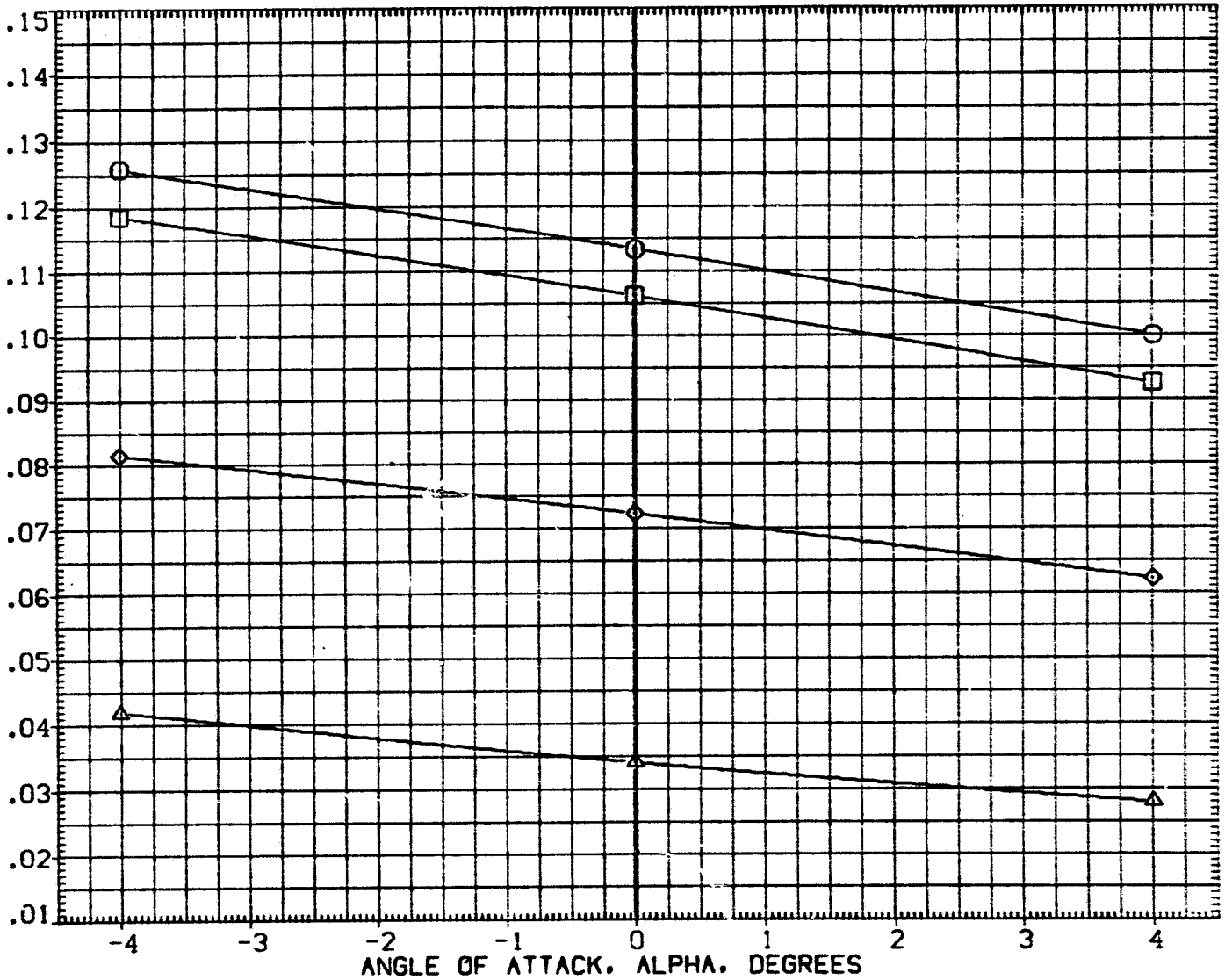



FIG. 32 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.25PLUME ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X23) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XA8) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4X98) ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4X82) △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

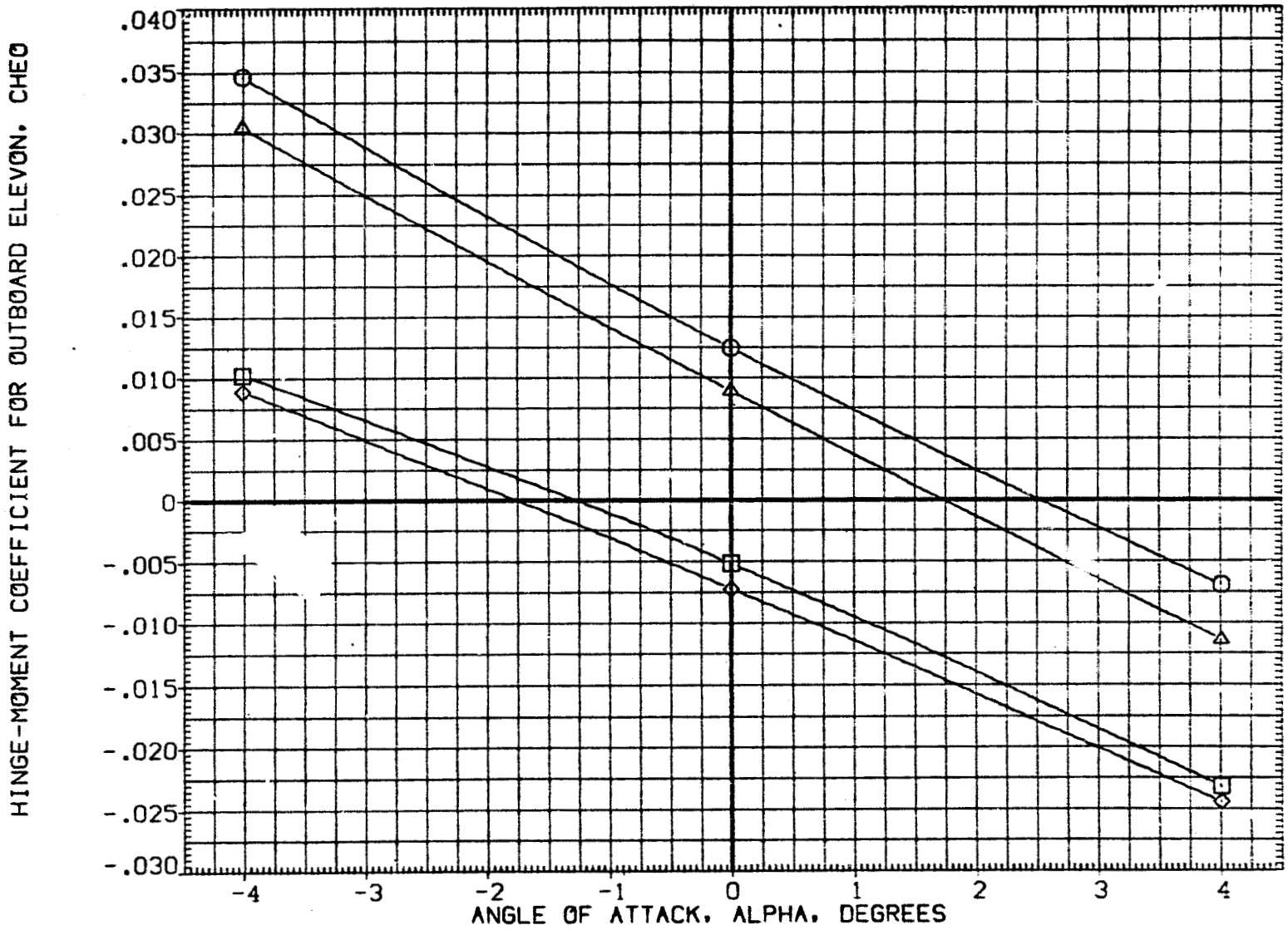



FIG. 32 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH,M=1.25PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X61) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.250 | 4.250 |
| (RE4X72) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

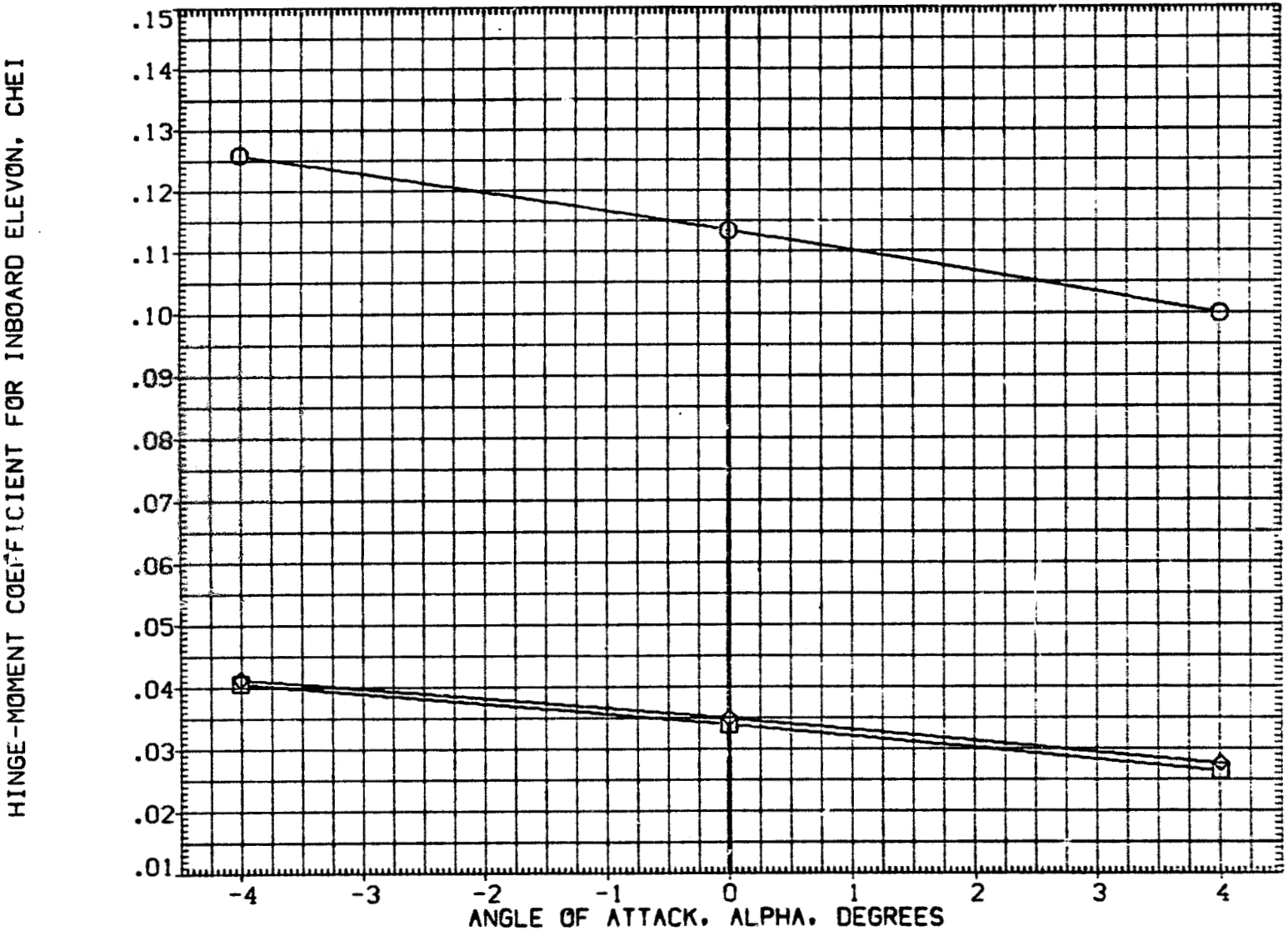



FIG. 32 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH,M=1.25PLUME ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X23) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X61) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.250 | 4.250 |
| (RE4X72) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

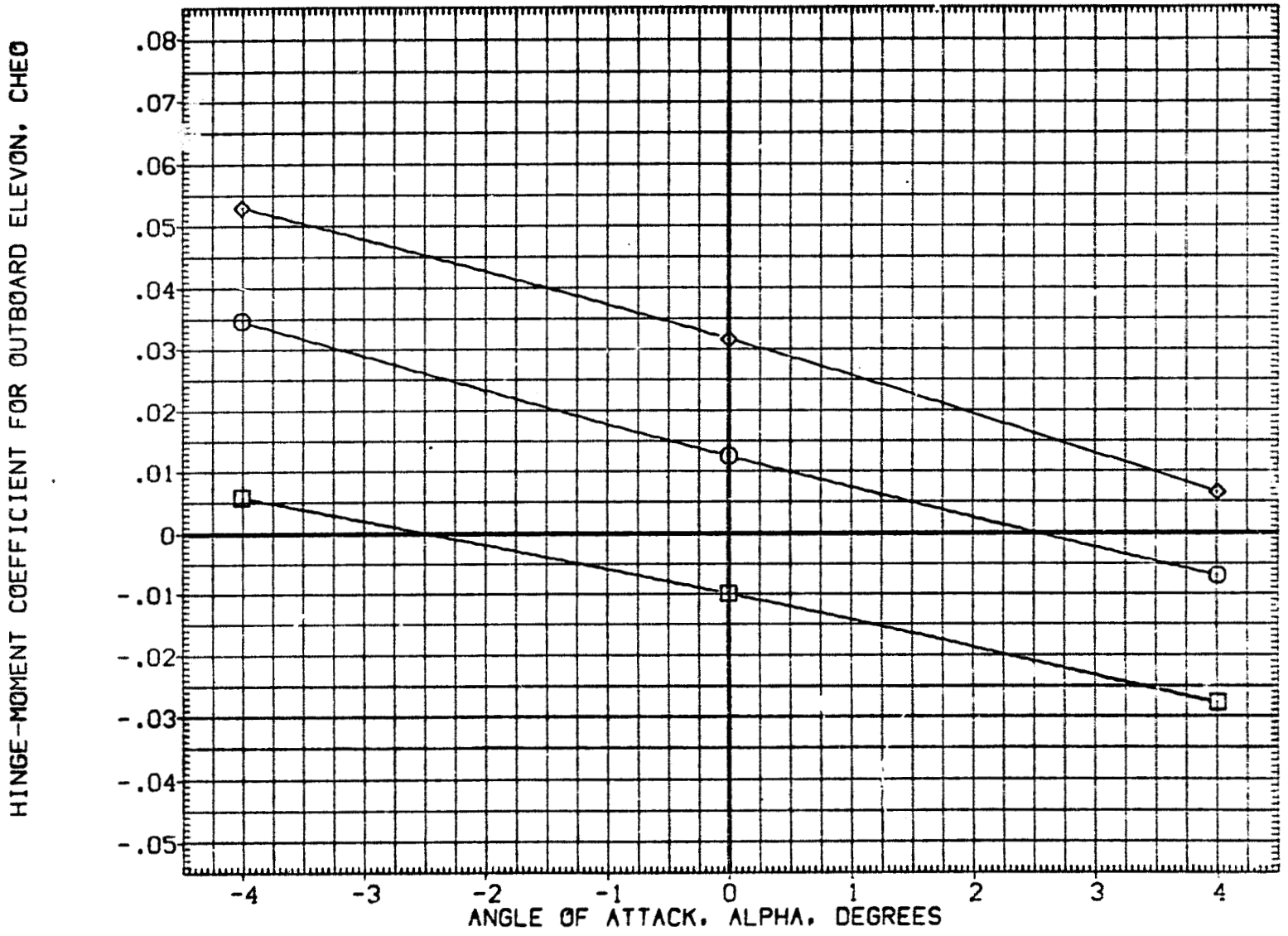



FIG. 32 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH,M=1.25PLUME ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X24) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XA9) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4X99) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4X83) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

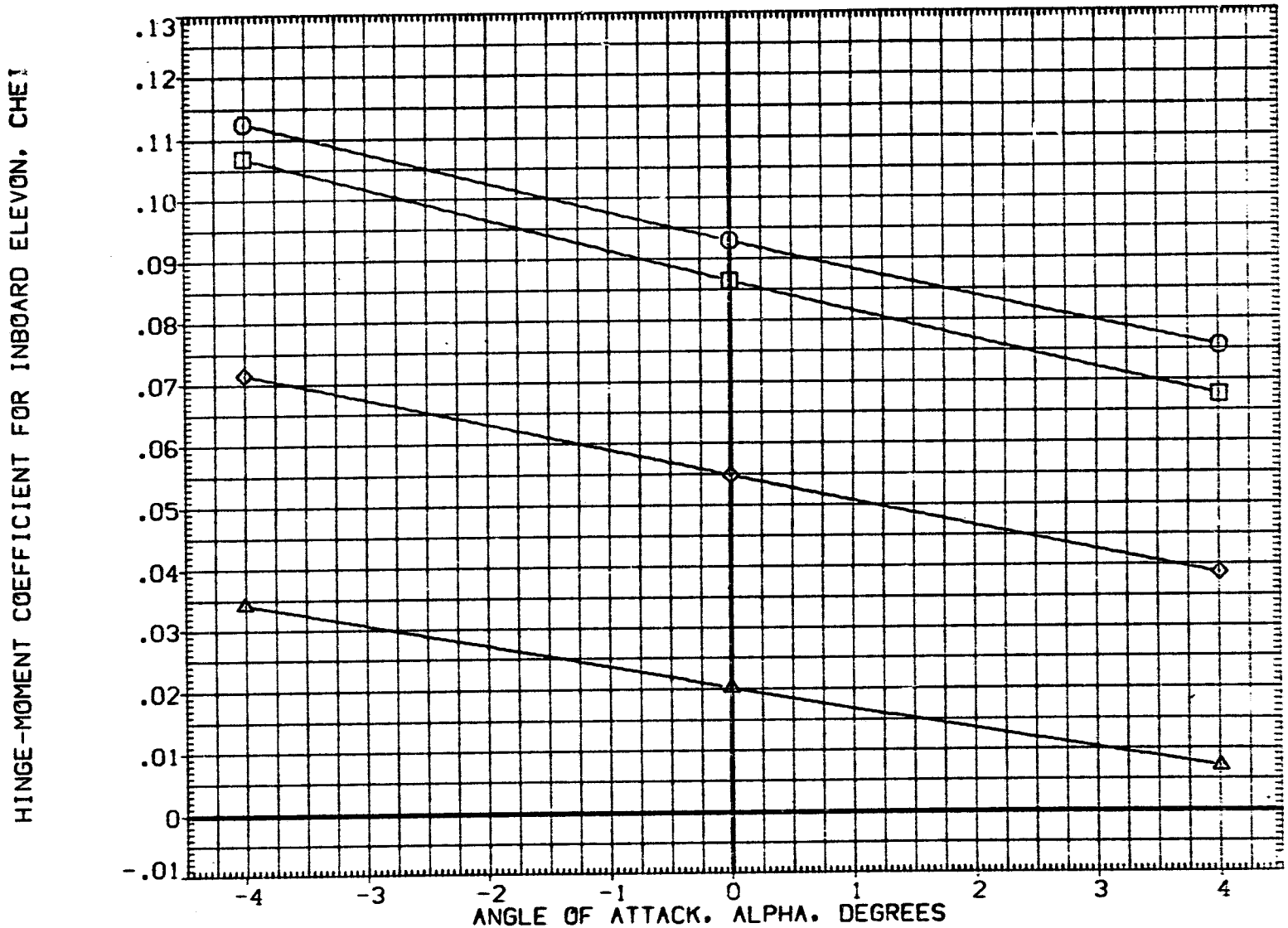



FIG. 33 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.4 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X24) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XA9) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4XS9) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4X83) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

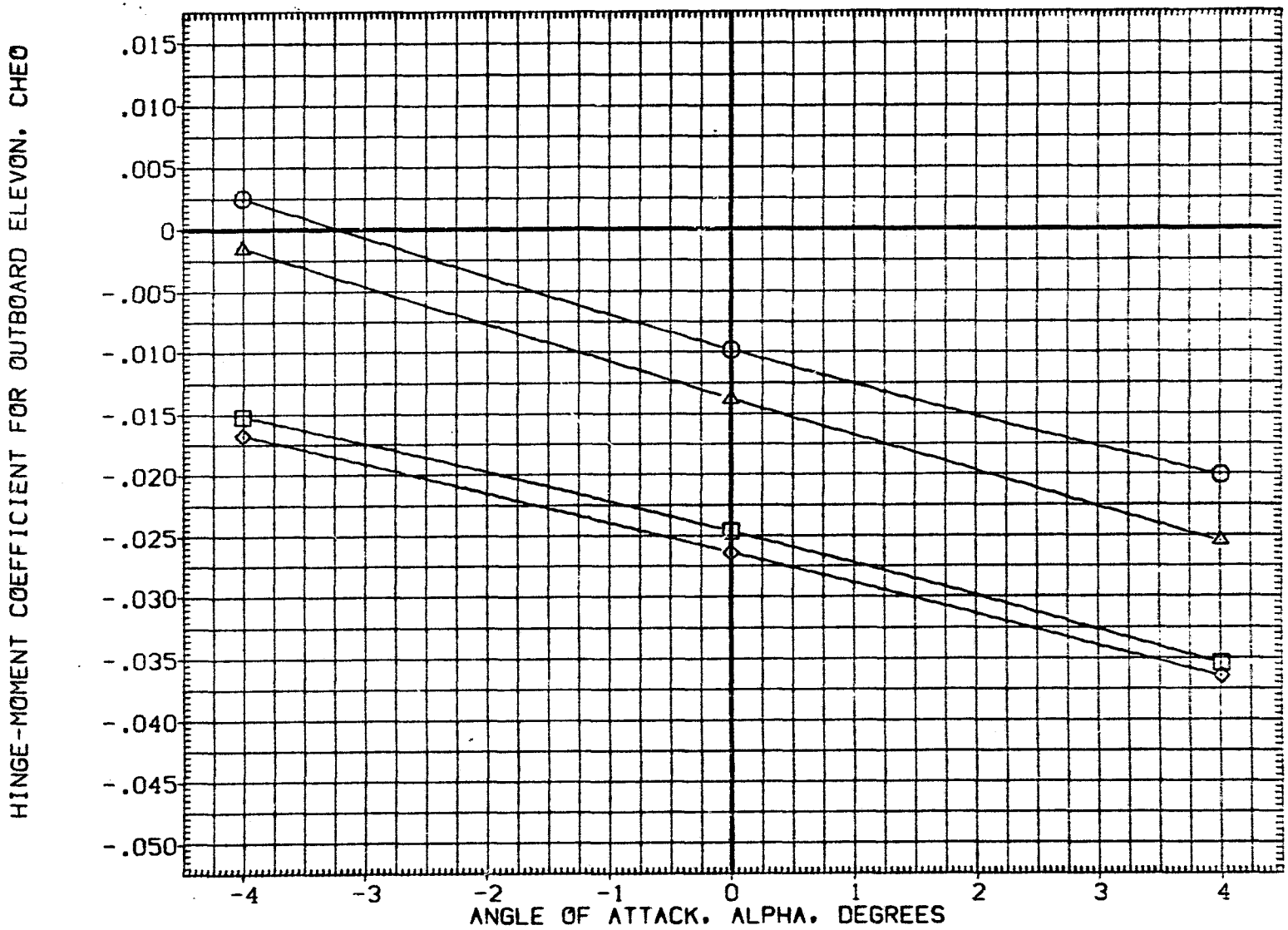



FIG. 33 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.4 PLUME ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X24) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X62) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

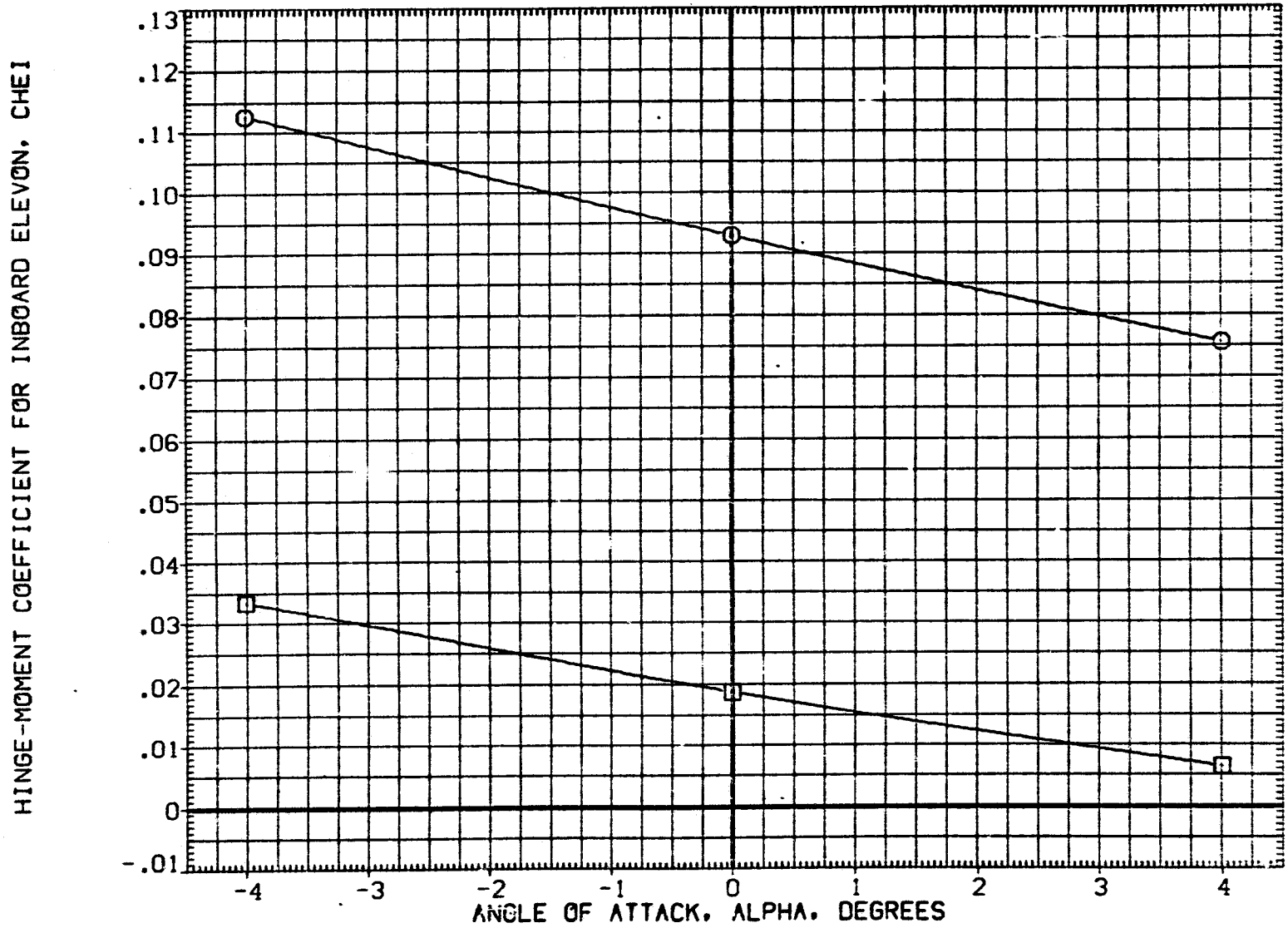



FIG. 33 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.4 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X24) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X62) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

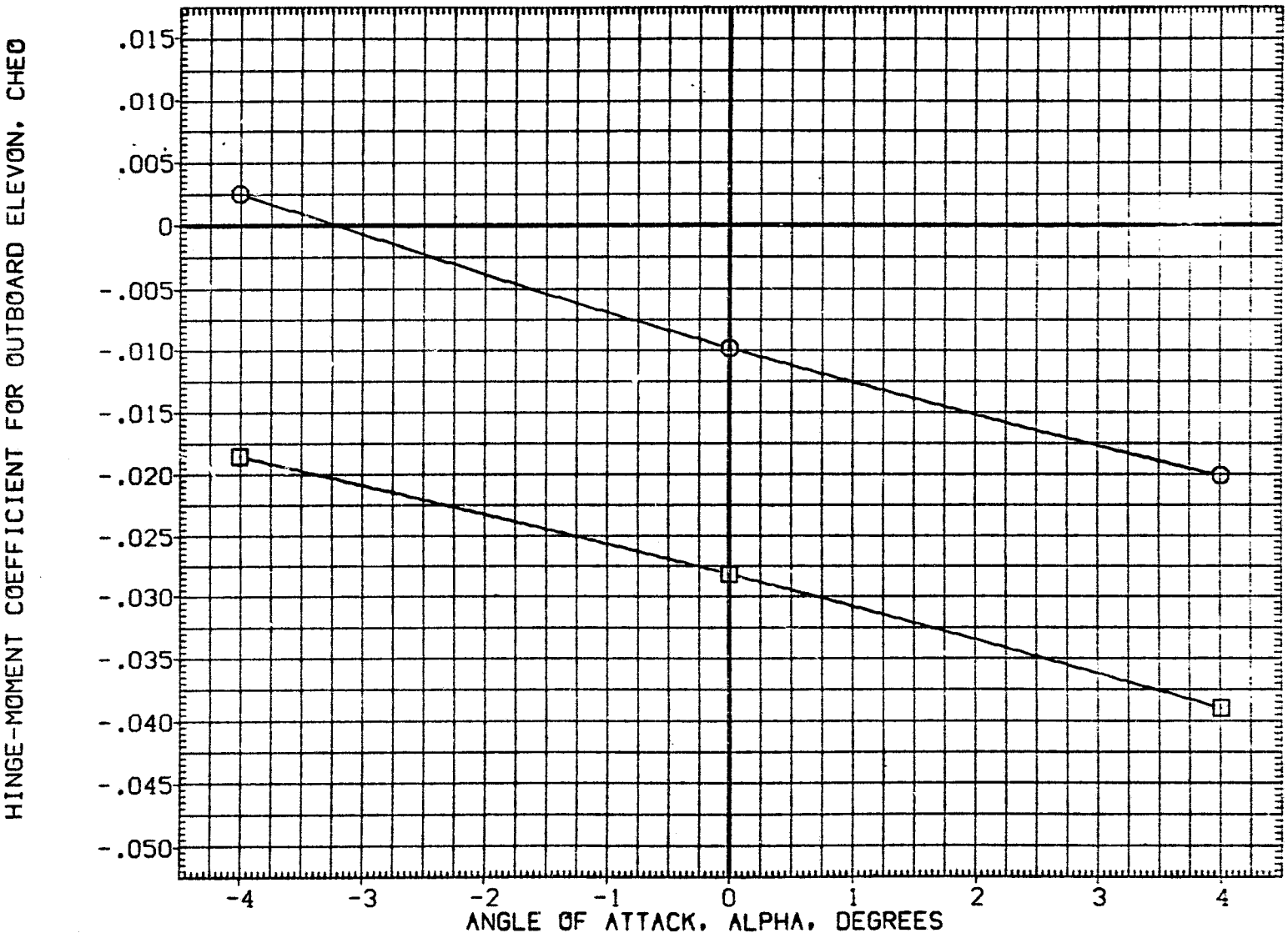



FIG. 33 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.4 PLUME ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4YA5) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .600 | 3.400 |
| (RE4Y95) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4Y79) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

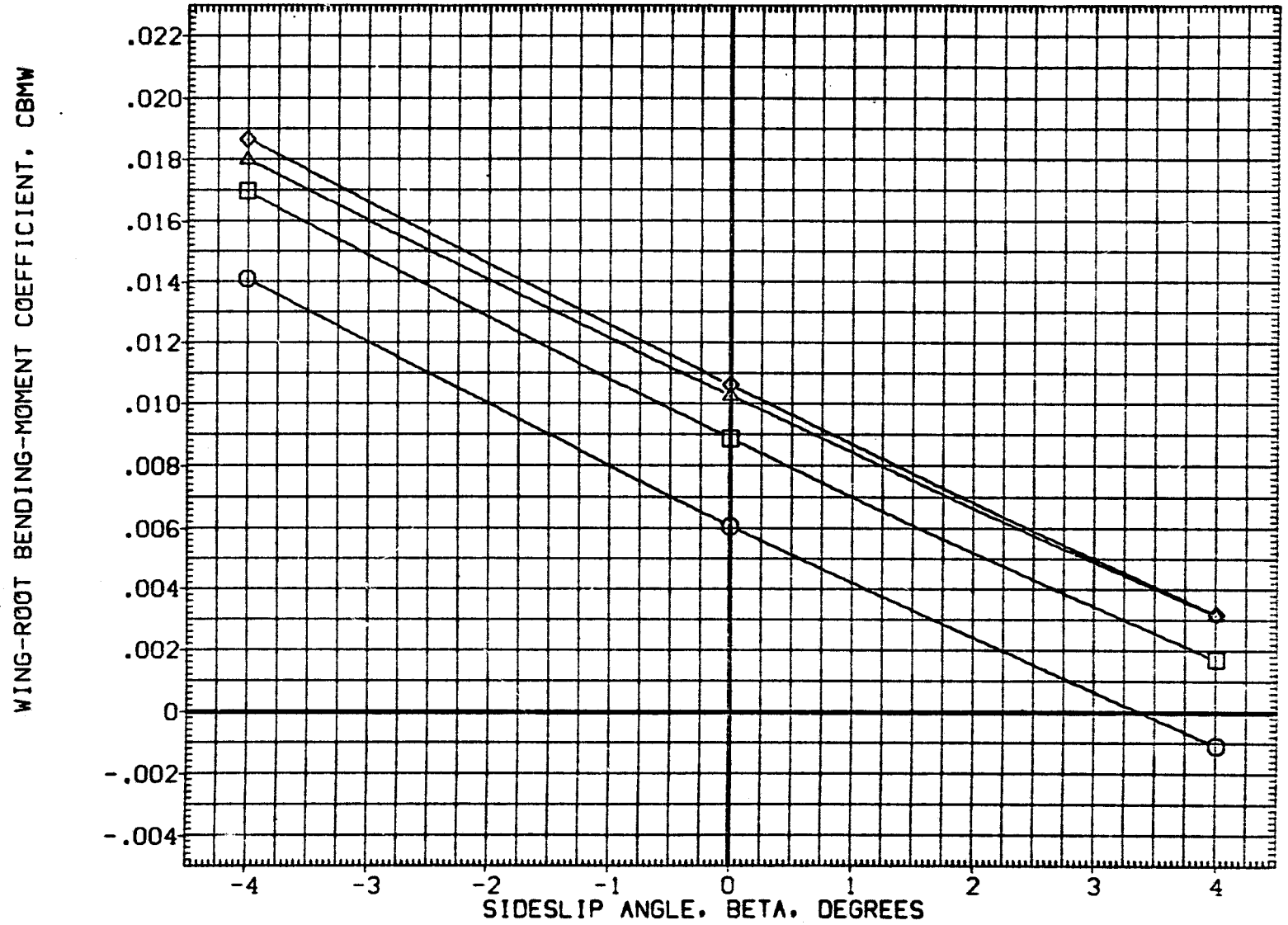



FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4YA5) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .600 | 3.400 |
| (RE4Y95) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4Y79) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

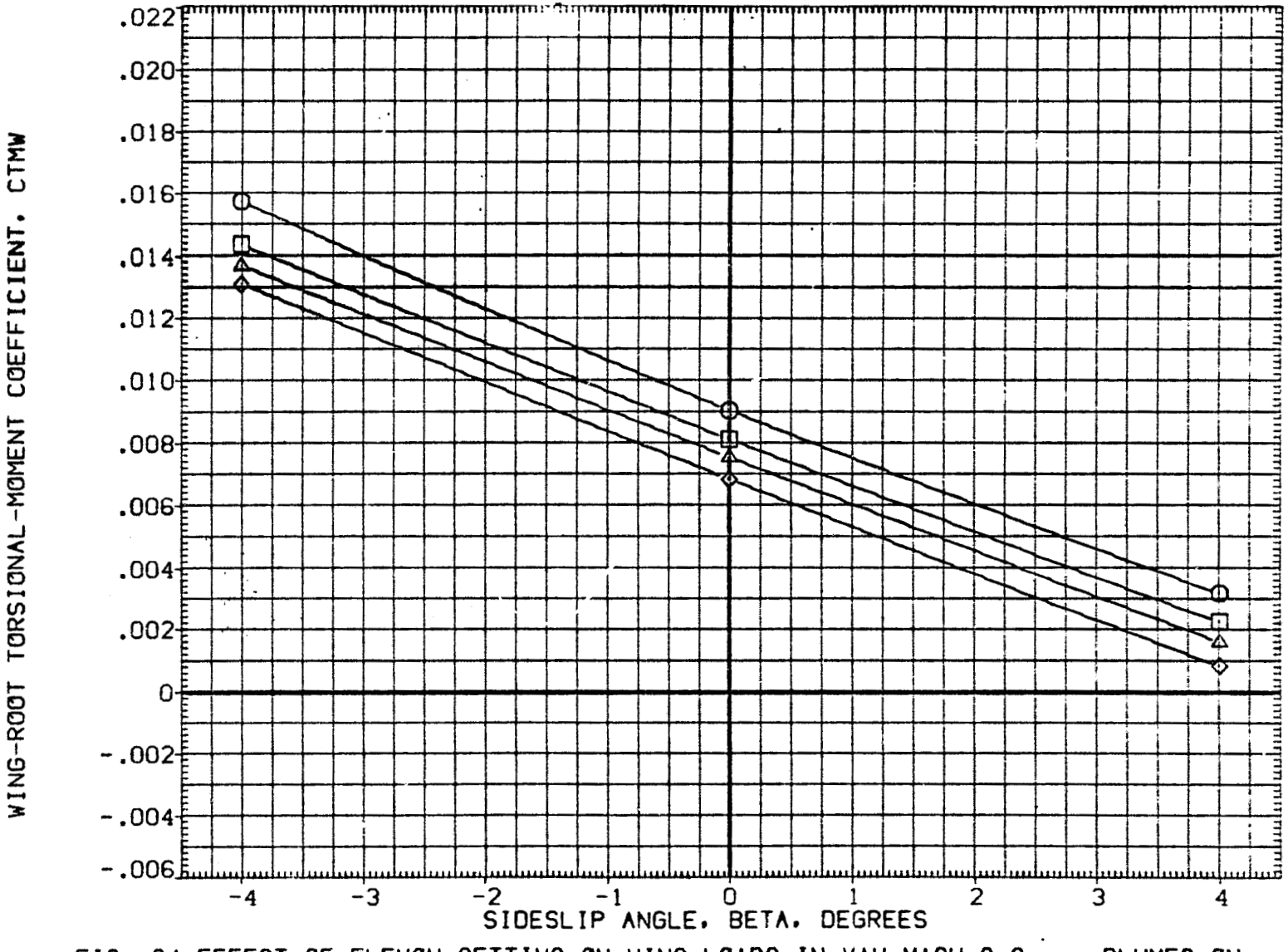



FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES ON

(A) ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4YA5) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .600 | 3.400 |
| (RE4Y95) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4Y79) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

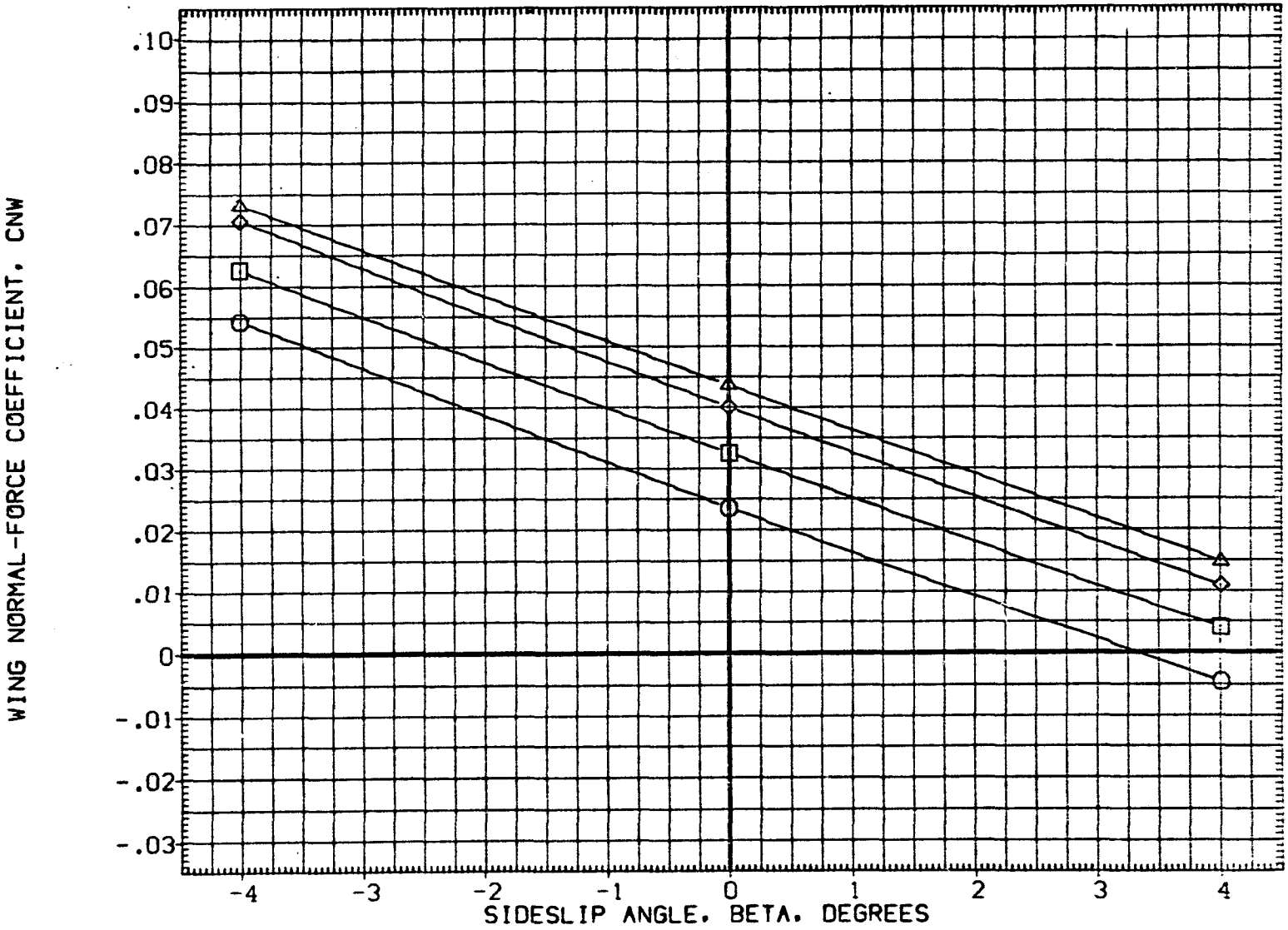



FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y87) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4Y58) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4Y69) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

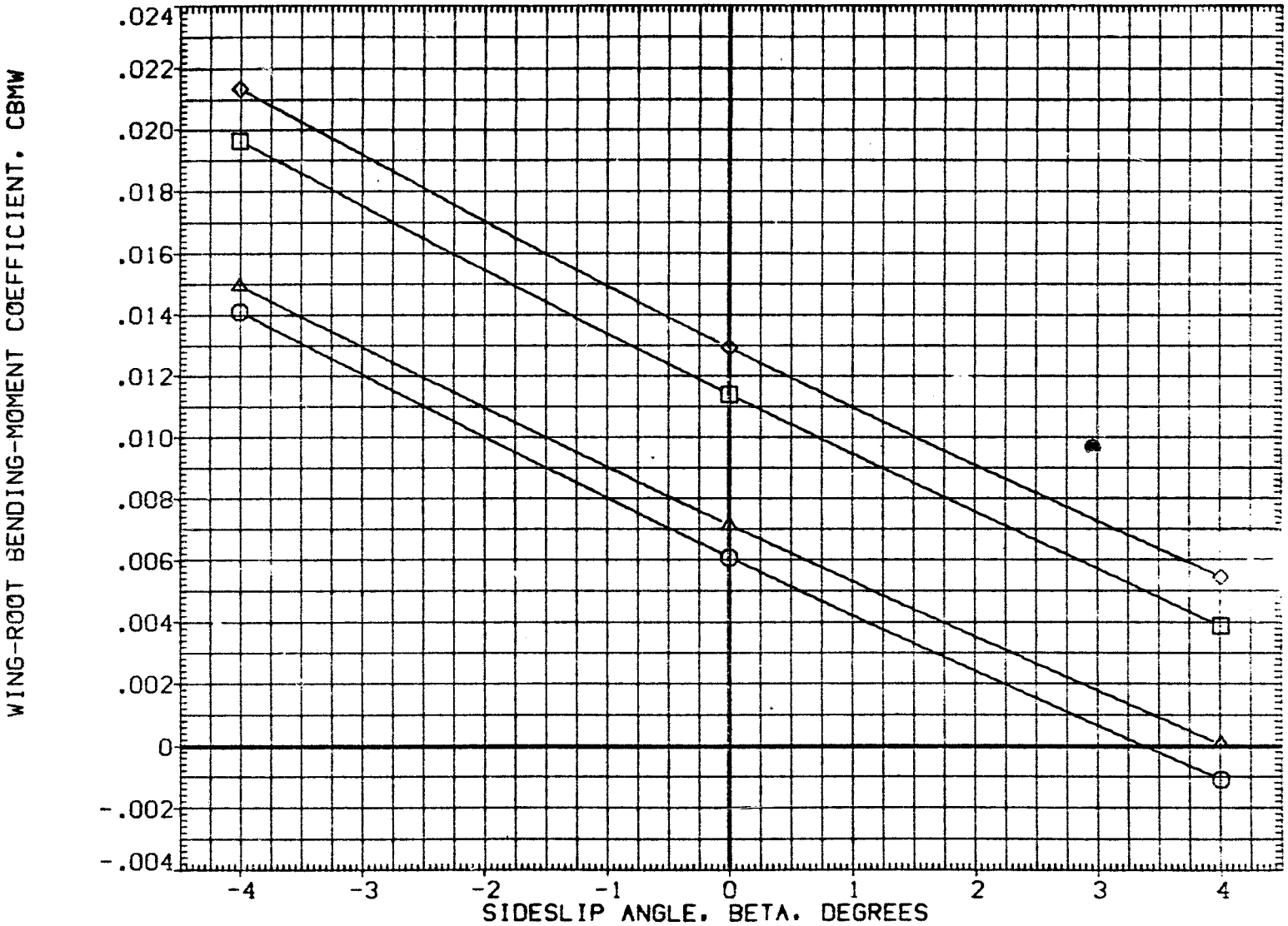



FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y87) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4Y58) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4Y69) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

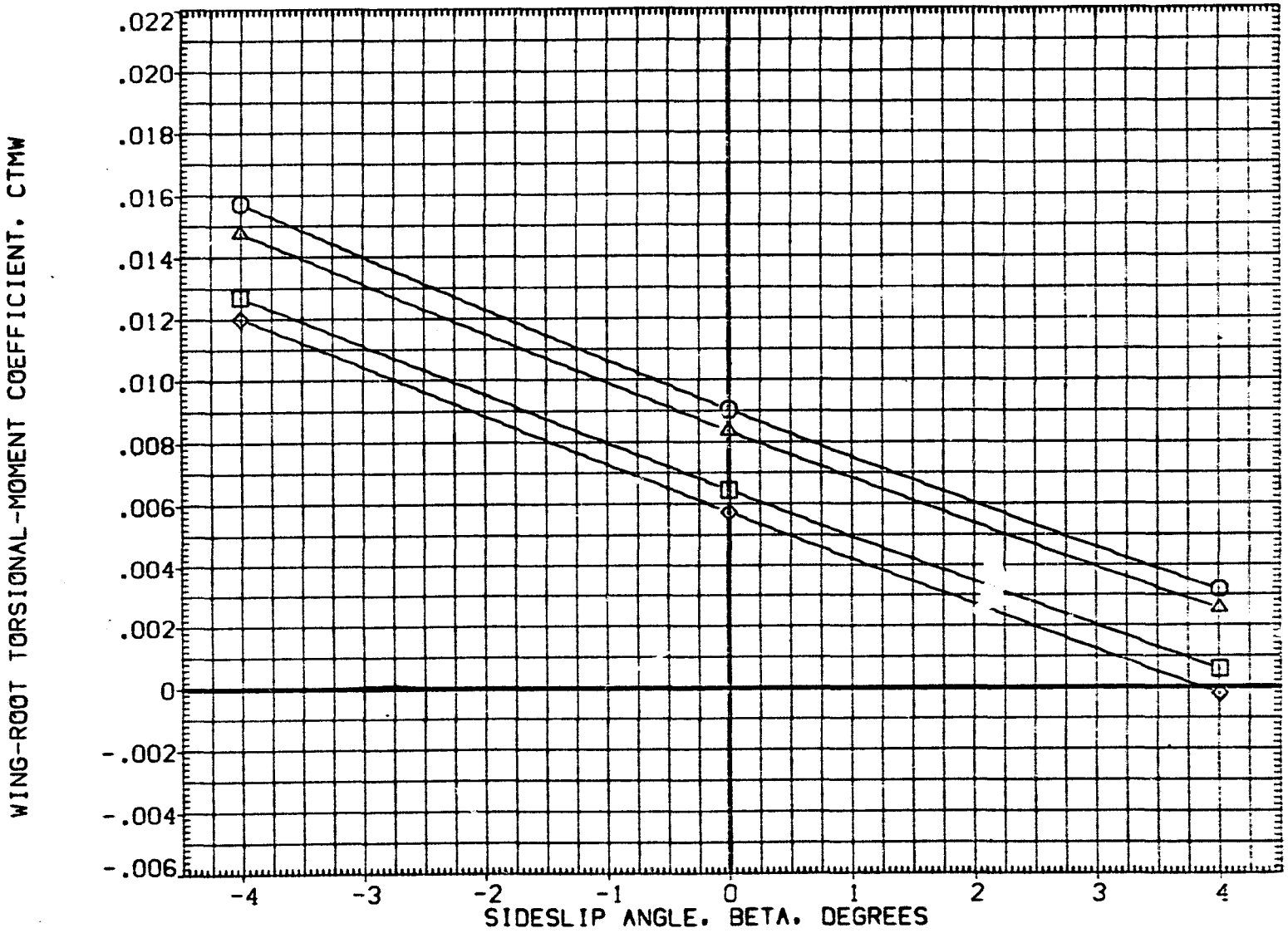



FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y87) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4Y58) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4Y69) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

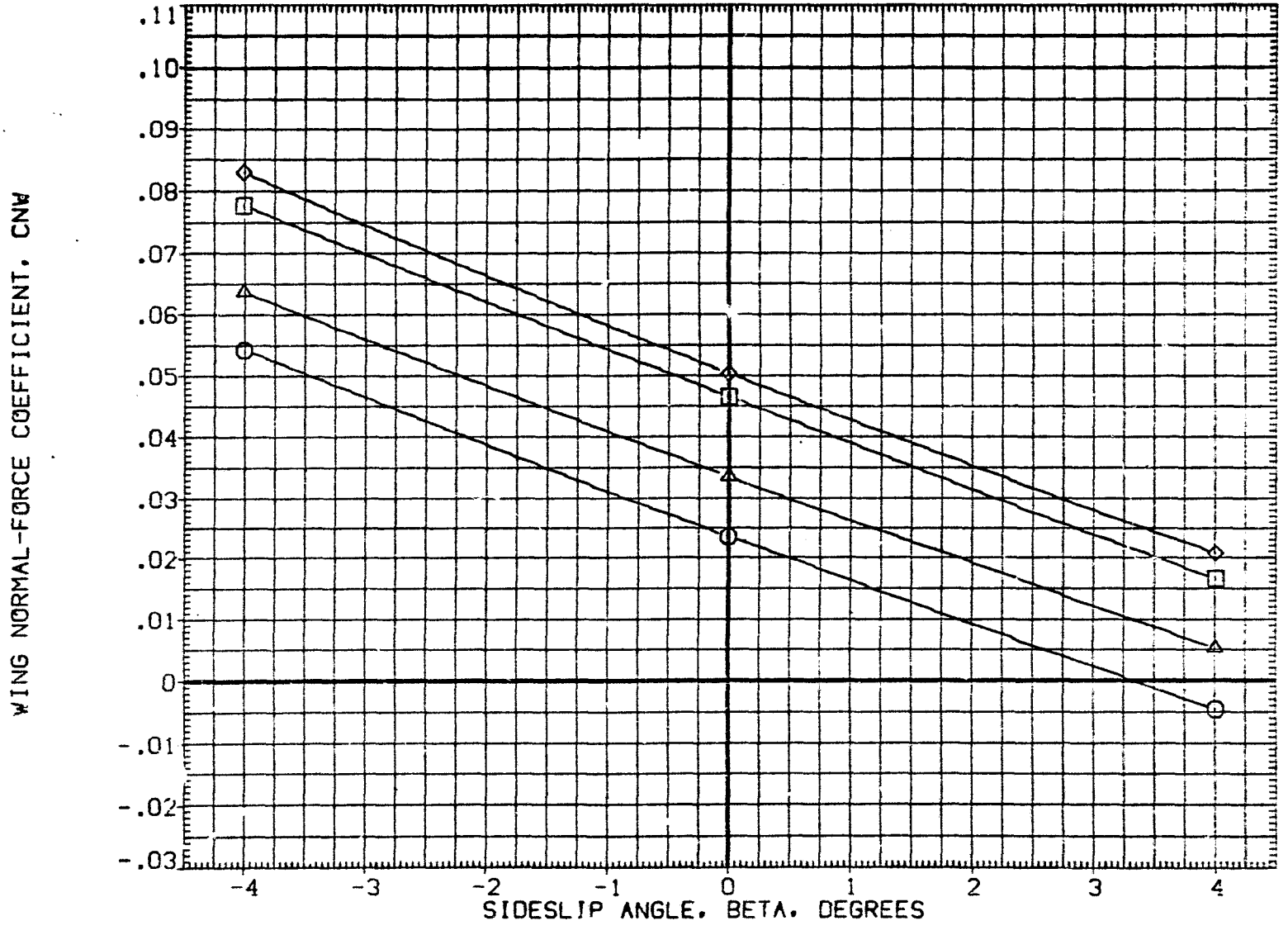



FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4YA6) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .900 | 4.250 |
| (RE4Y96) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4Y80) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 0.000 | .000 | .900 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

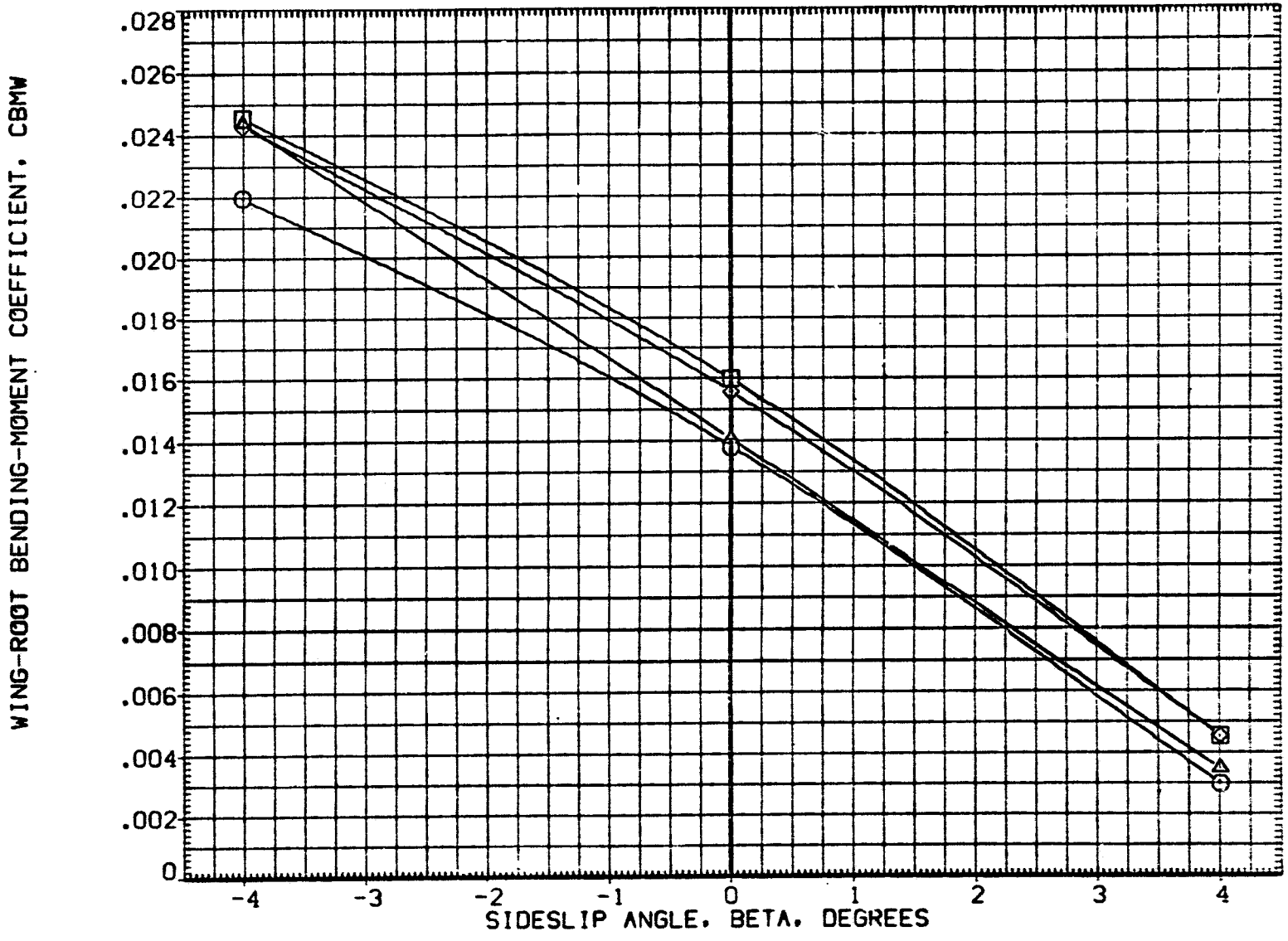



FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4YA6) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .900 | 4.250 |
| (RE4Y96) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4Y80) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

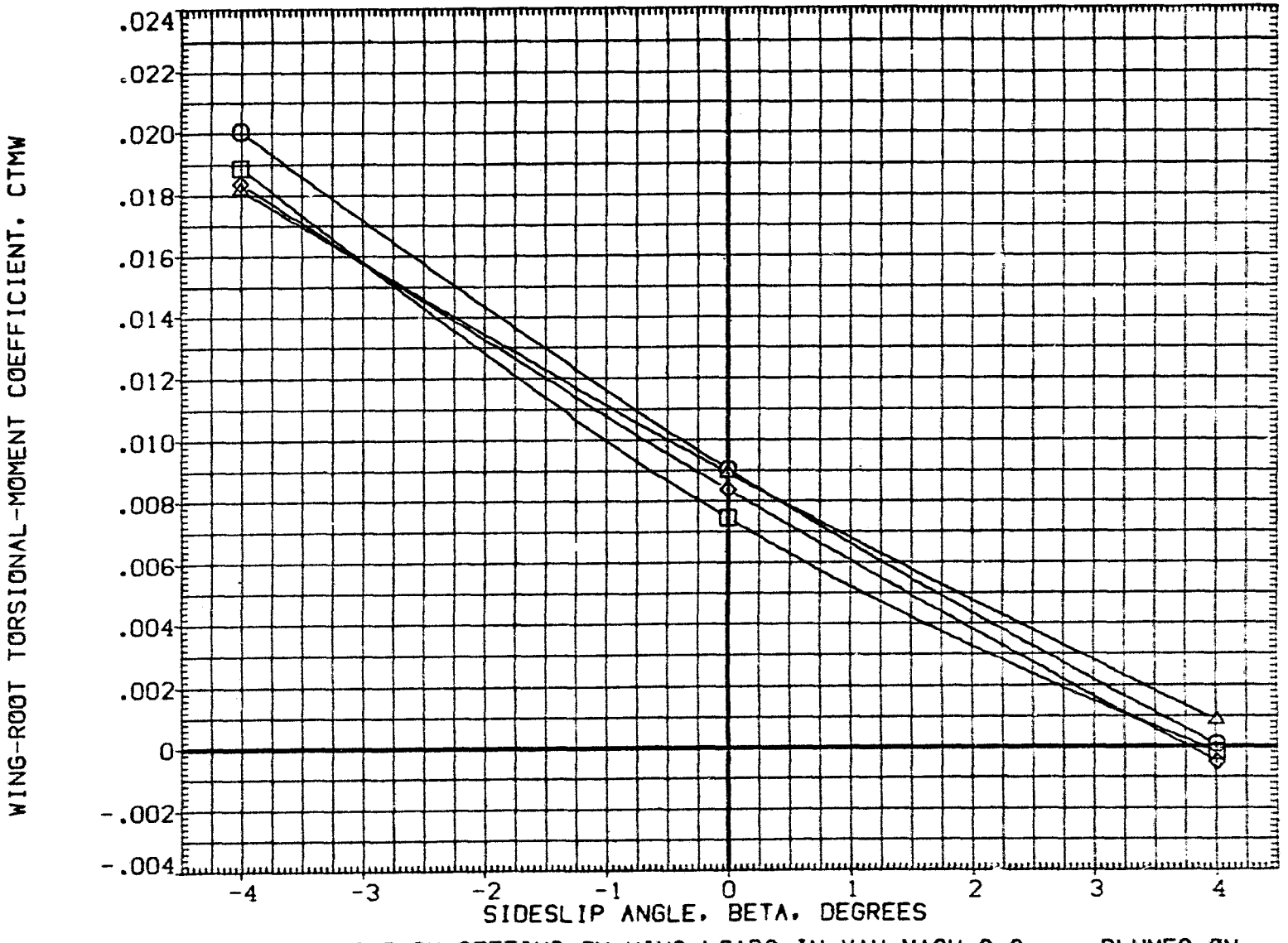



FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y21) ○ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4YA6) □ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .900 | 4.250 |
| (RE4Y96) ◇ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4Y8O) △ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

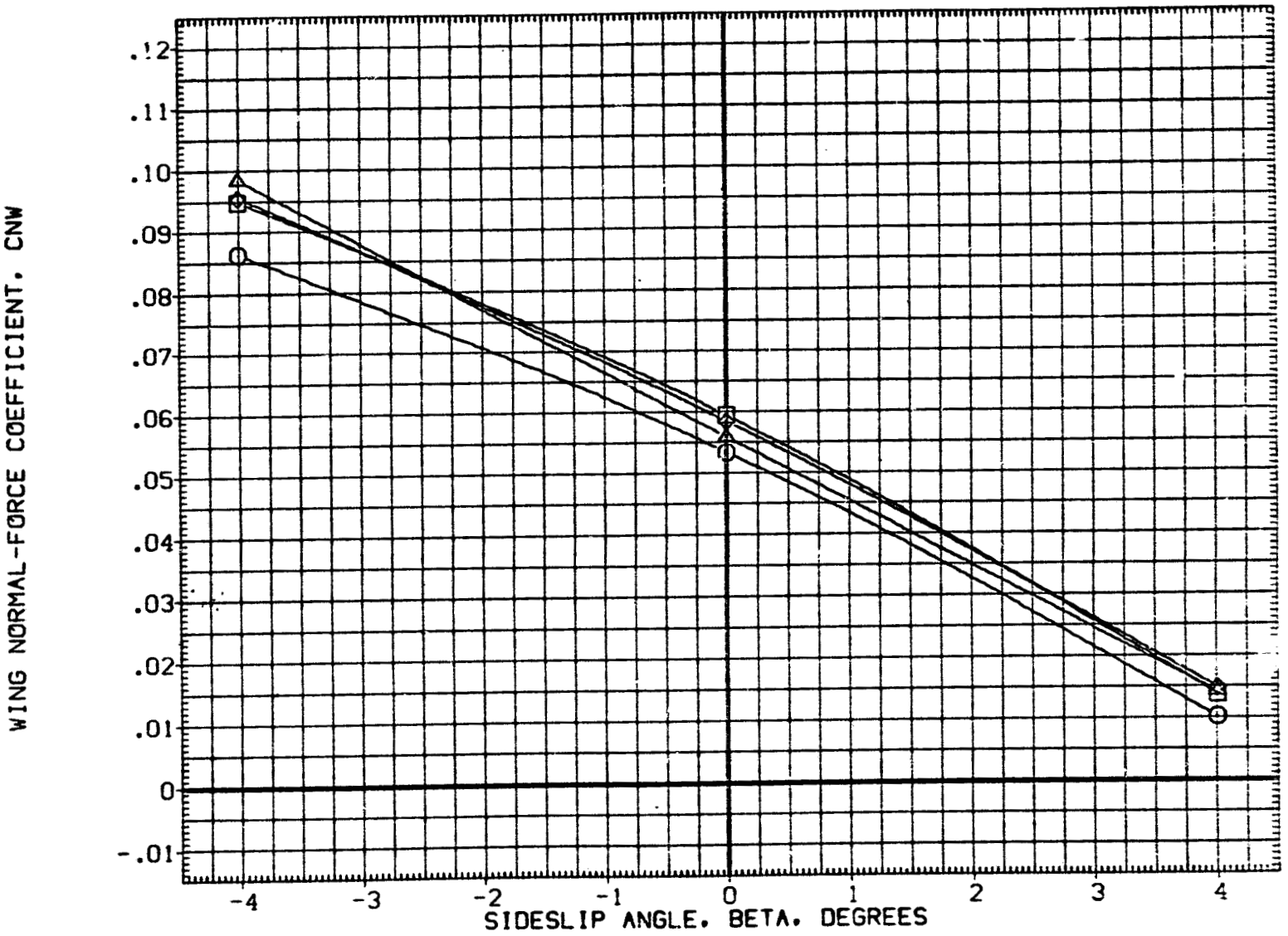



FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y21) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y88) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4Y59) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4Y70) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

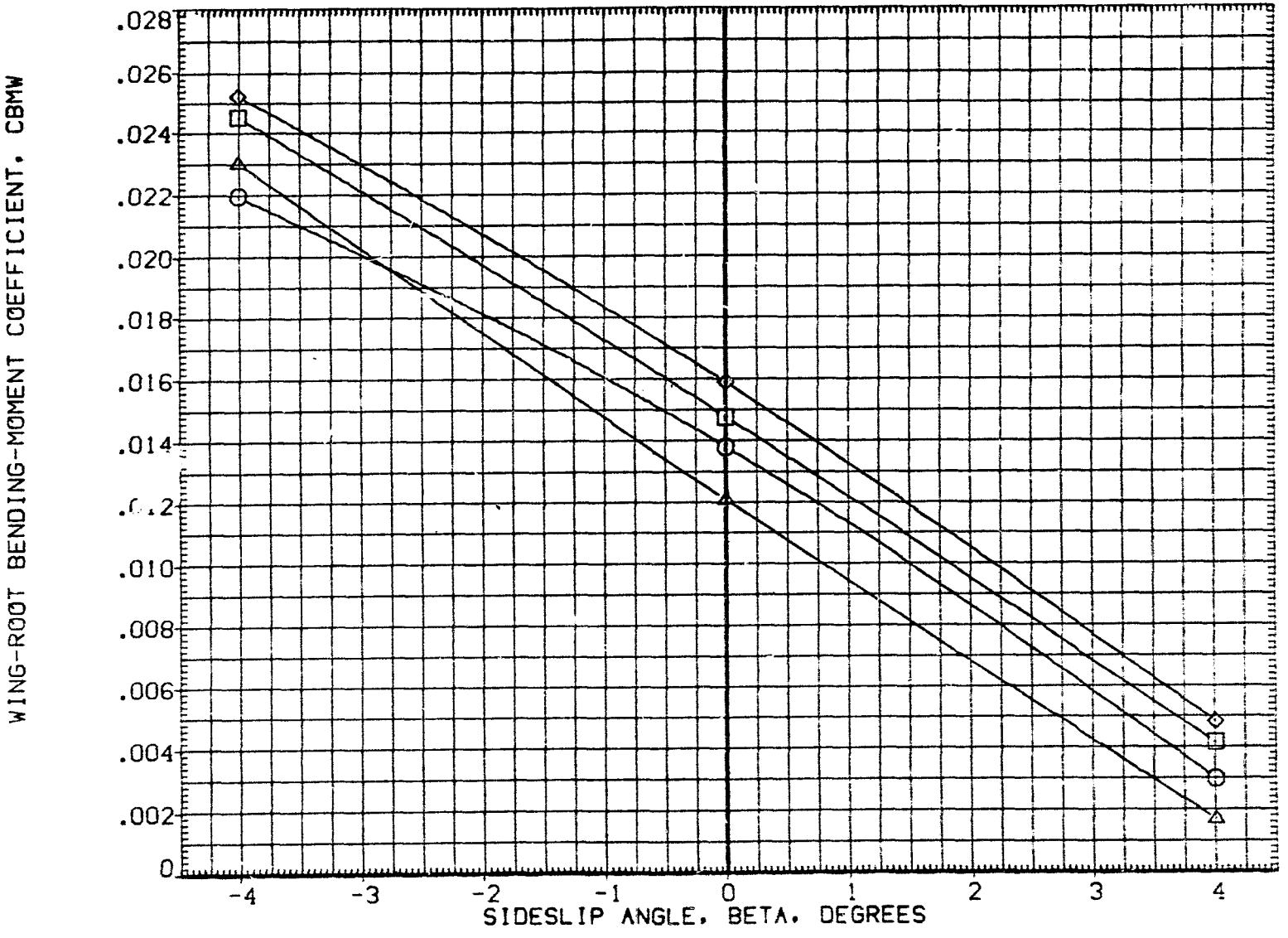



FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y88) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4Y59) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4Y70) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .900 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.0000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

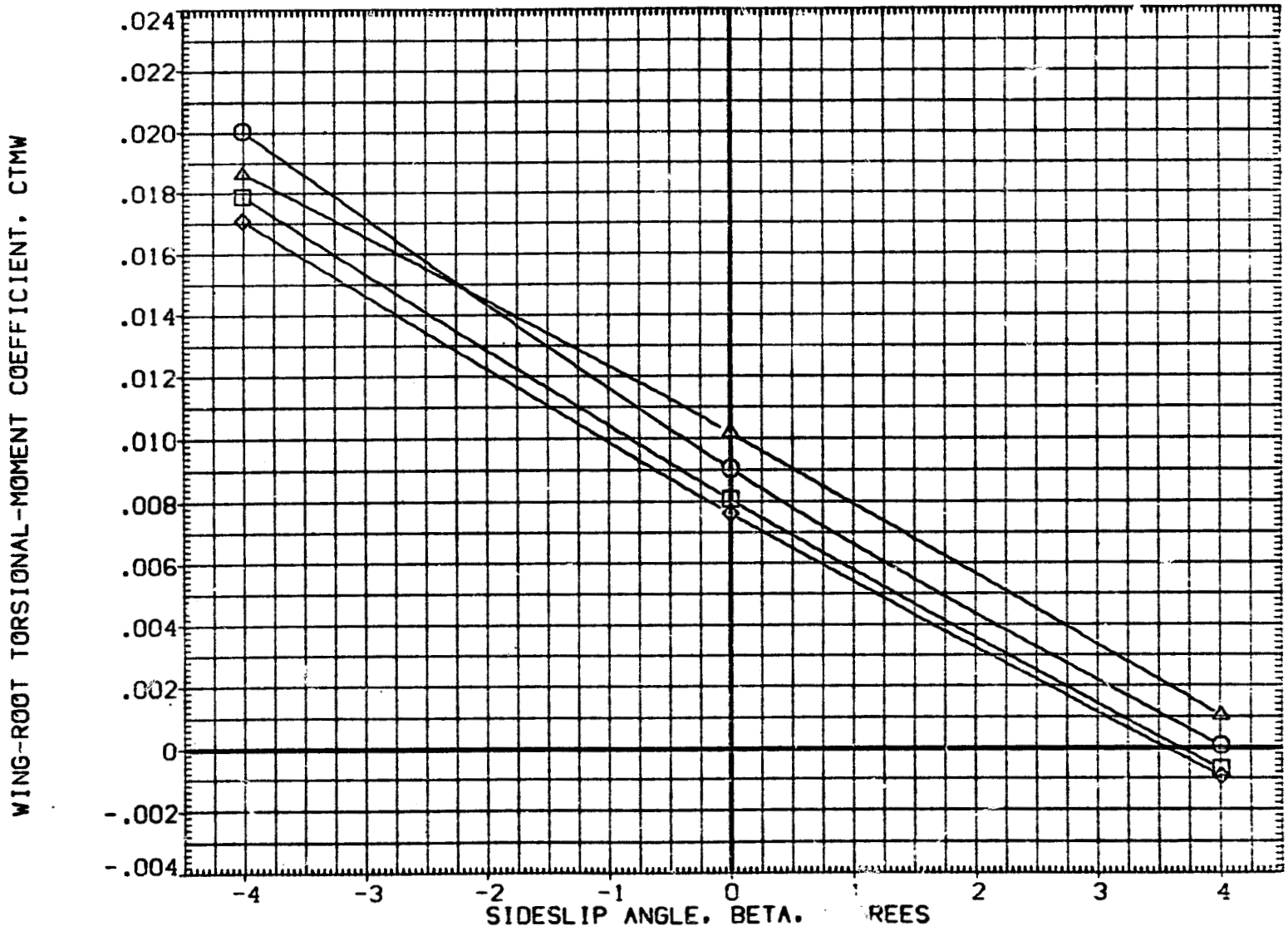



FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN RAW,MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y88) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4Y59) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4Y70) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

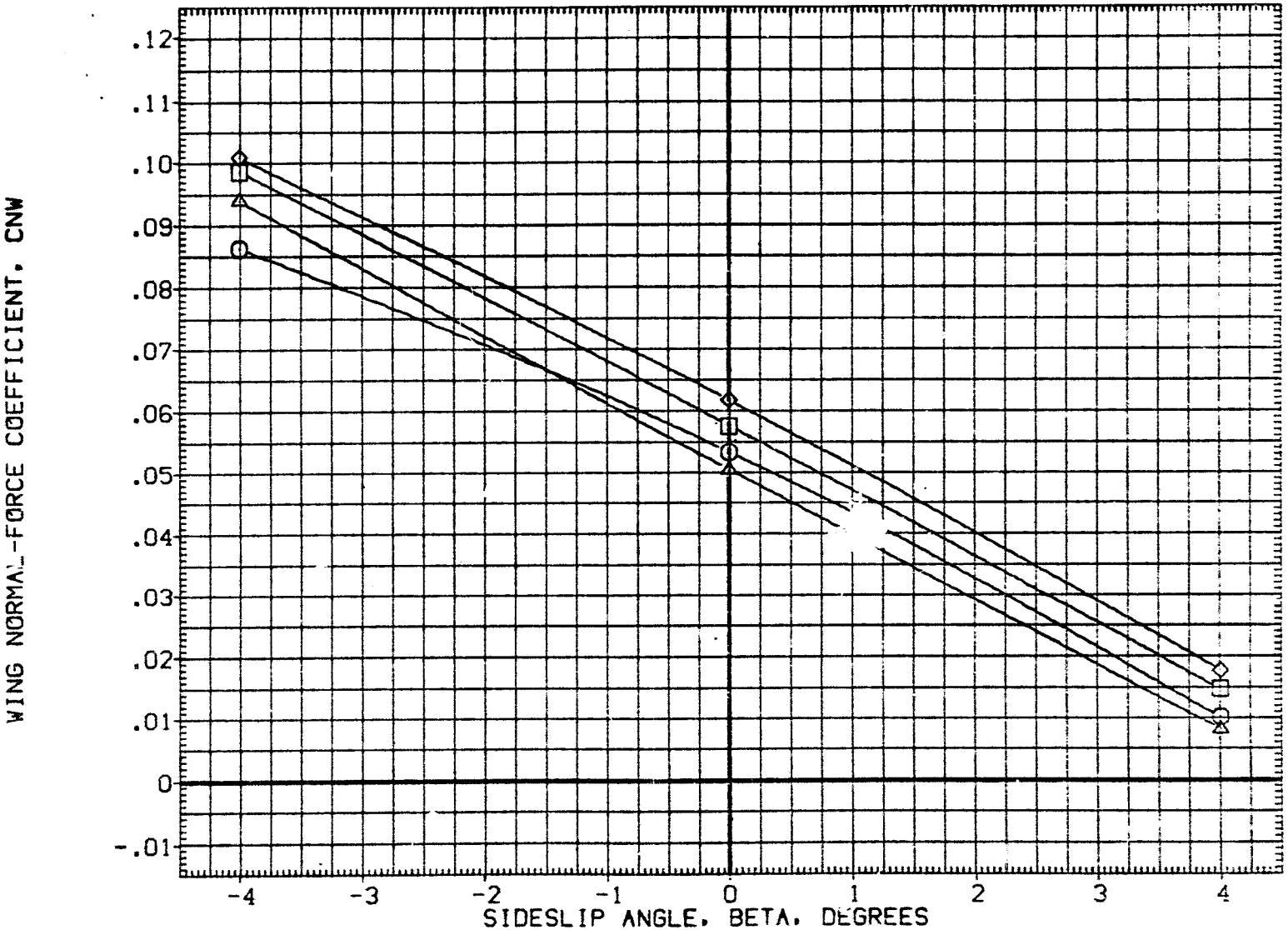



FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YA7) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4Y97) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y81) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

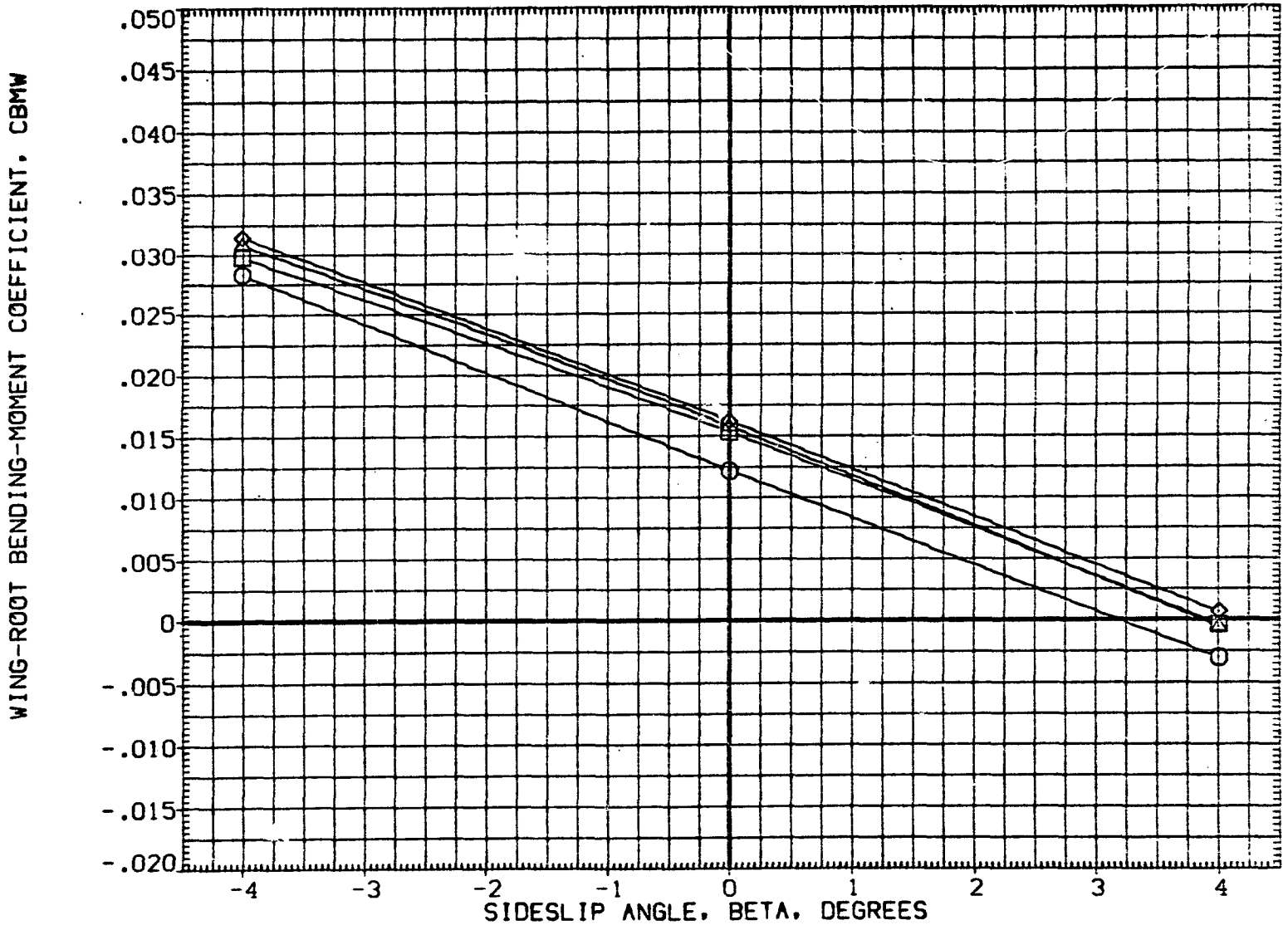



FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YA7) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4Y97) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y81) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

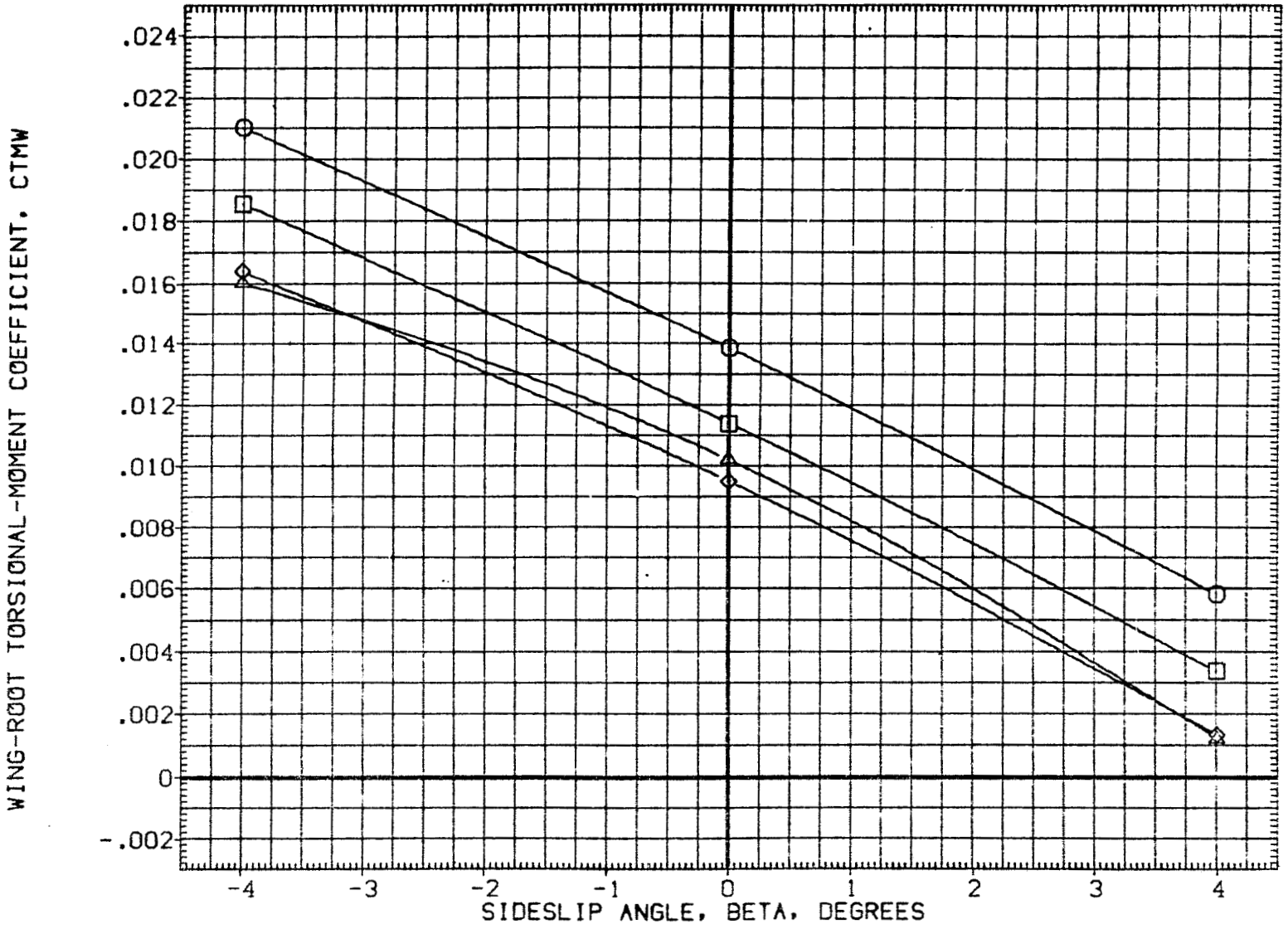



FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YA7) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4Y97) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y81) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

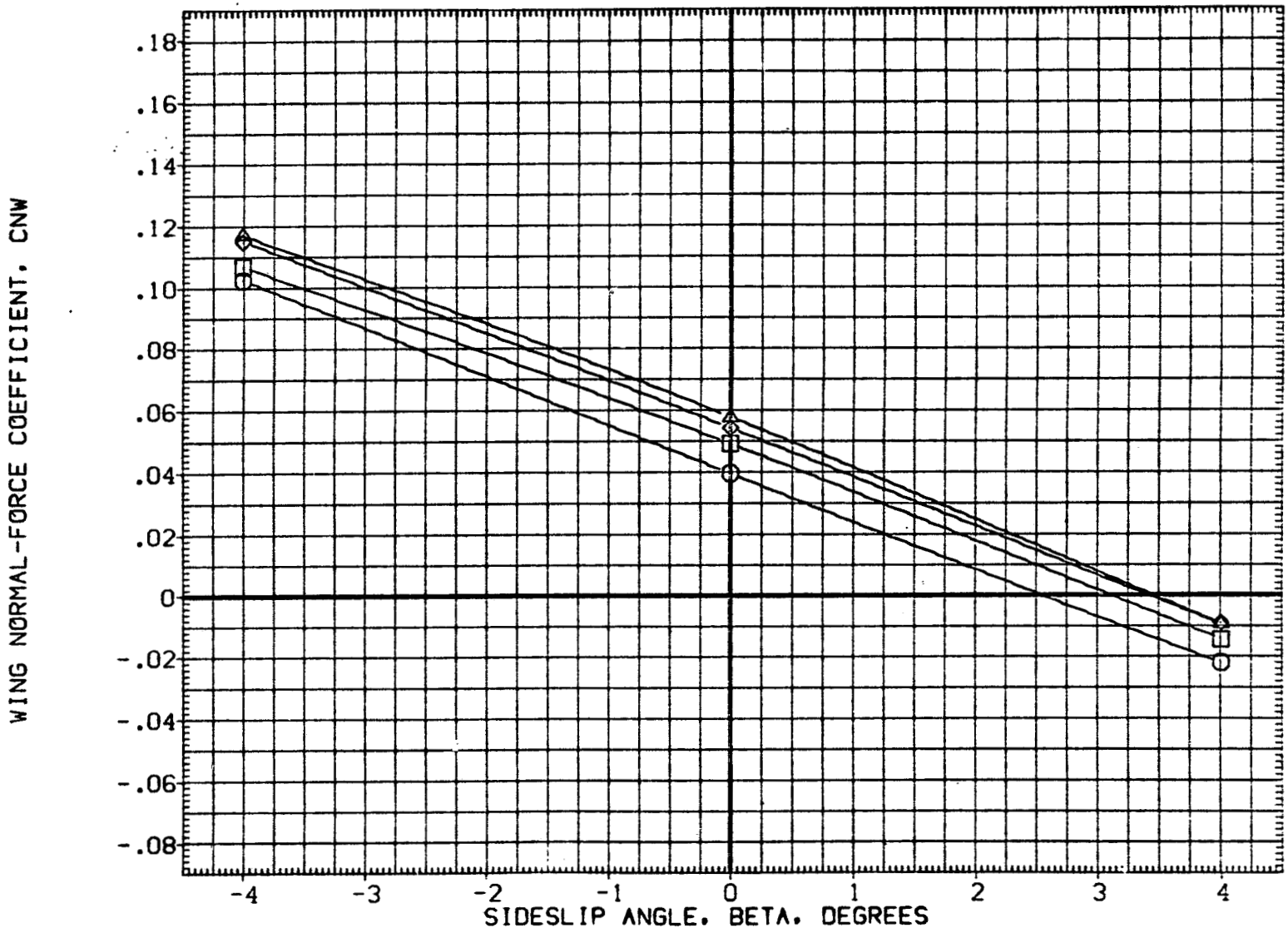



FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y89) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4Y60) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y71) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

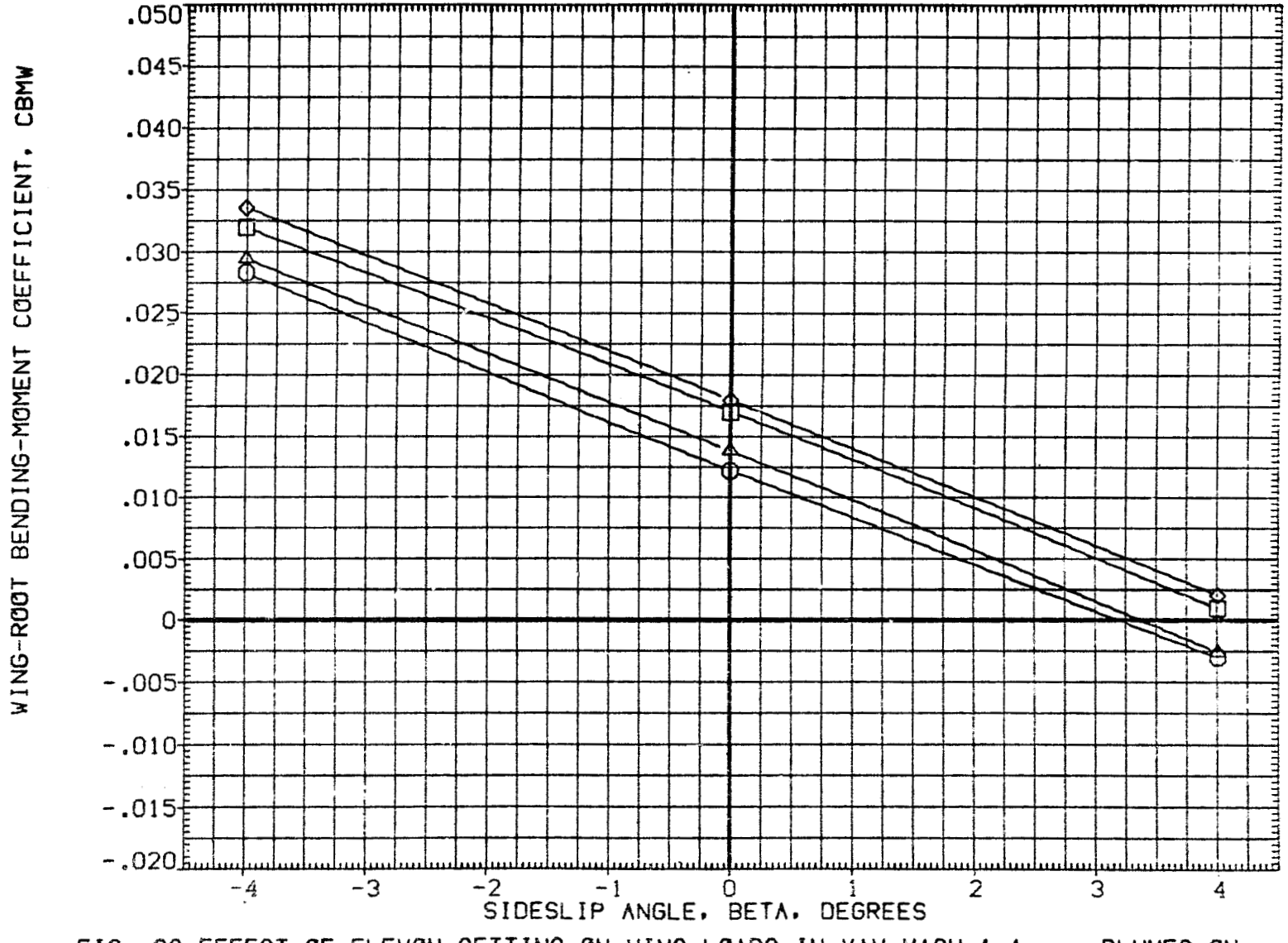



FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y89) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4Y60) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y71) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

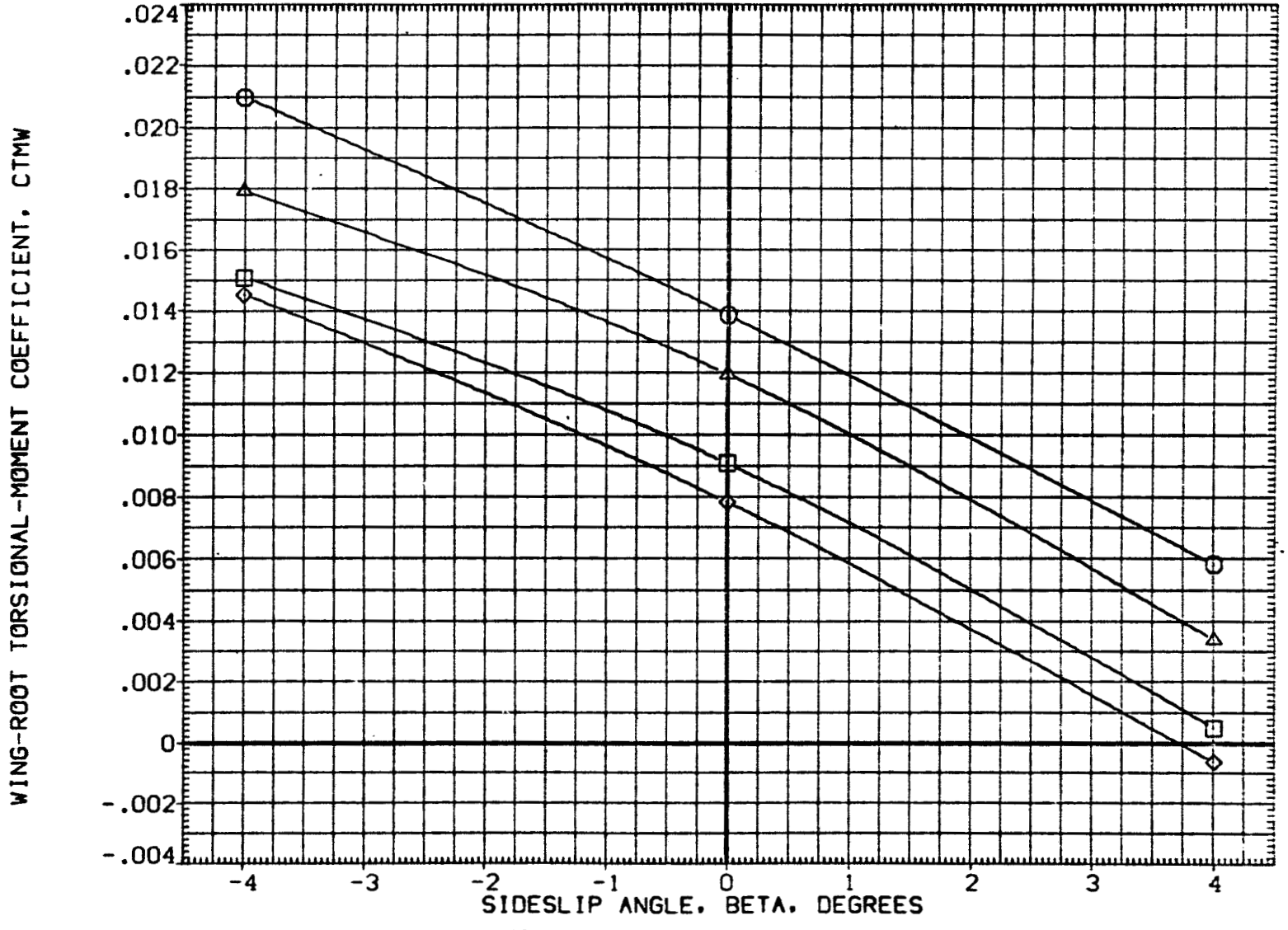



FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE*.22) | ○ | ARC 11-023 IA30 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y89) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4Y60) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y71) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

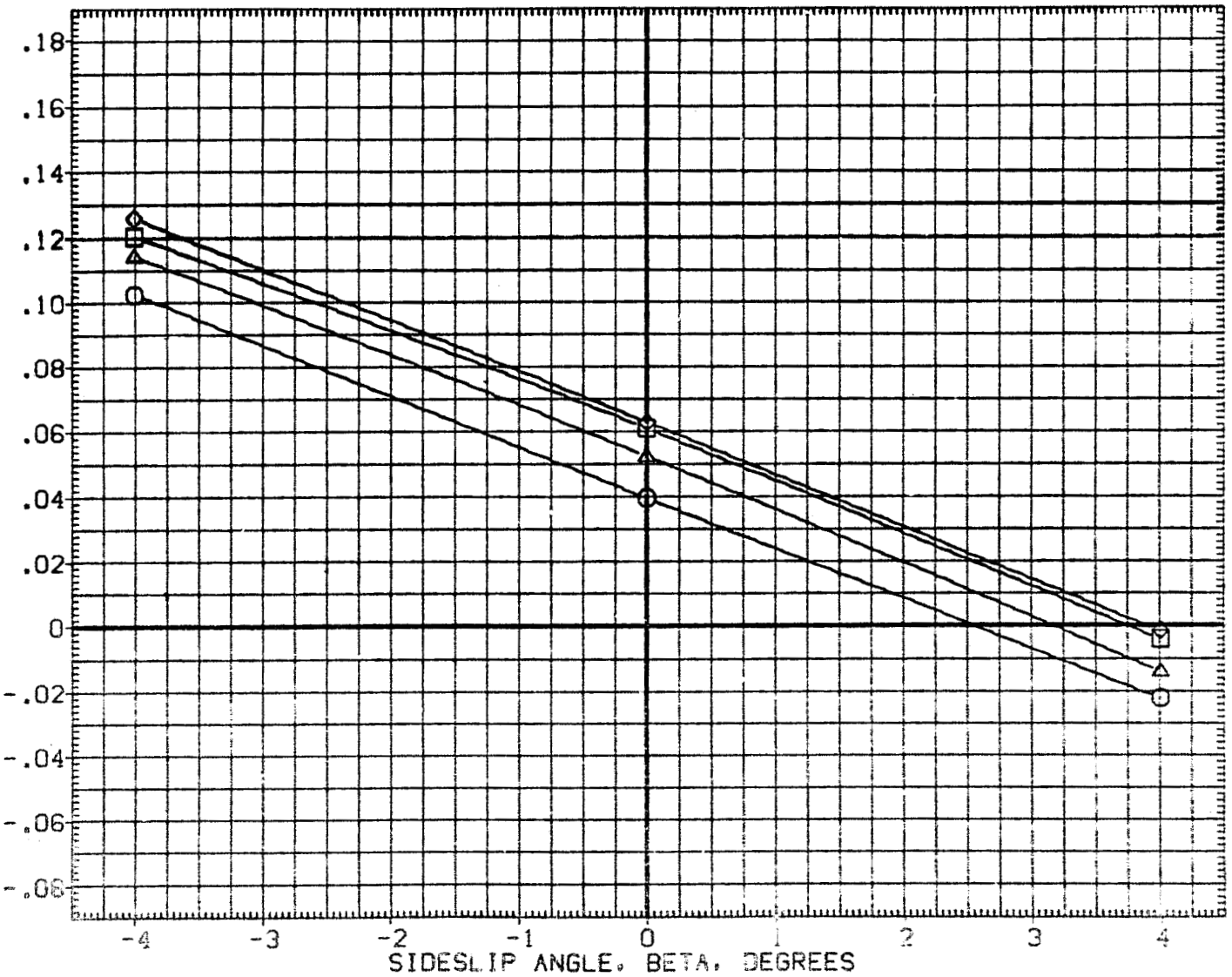



FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YA8) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4Y98) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y82) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

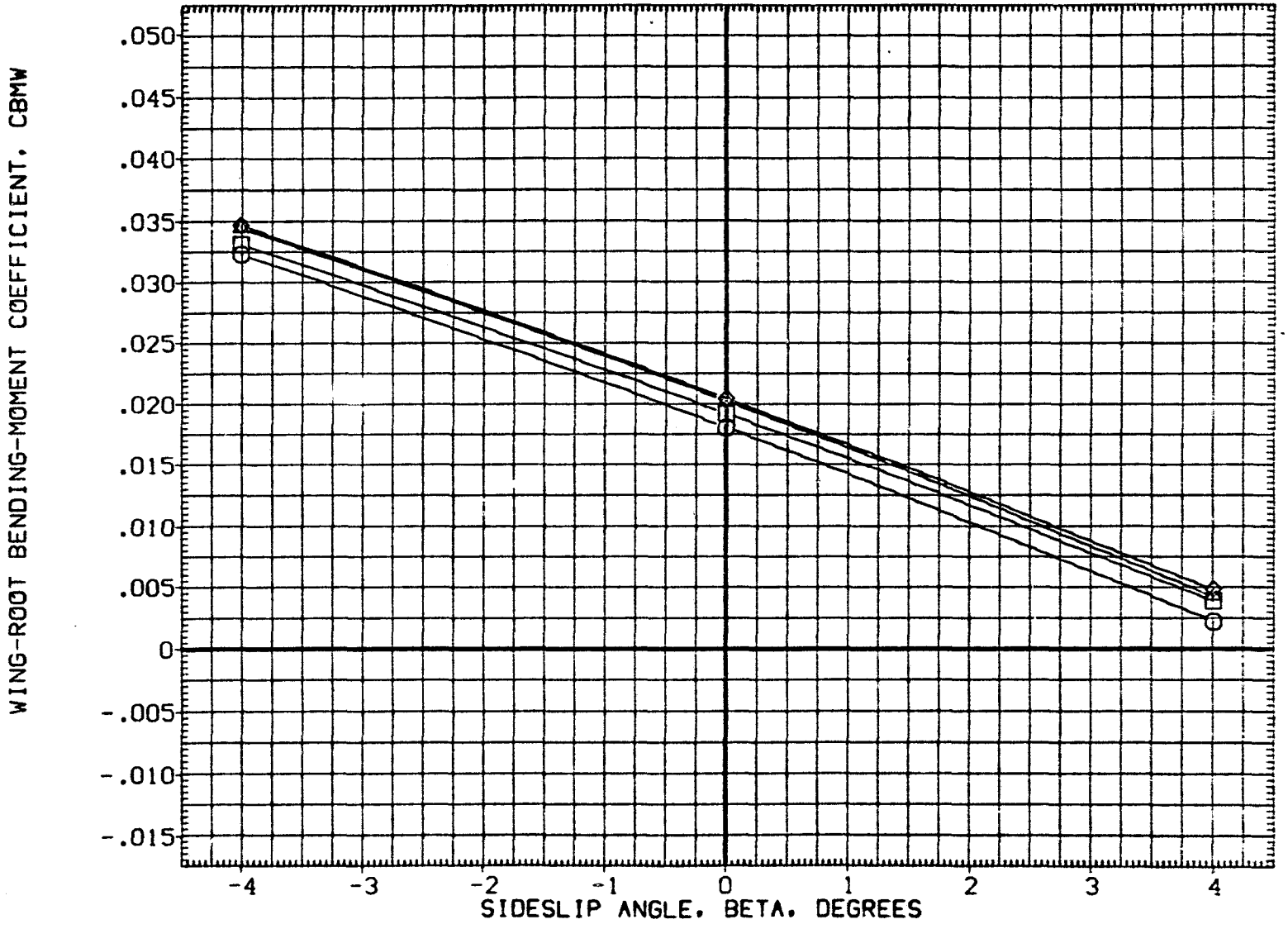



FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-1B | ELV-0B | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y23) | ○ | ARC 11-023 1A80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YA8) | □ | ARC 11-023 1A80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4Y98) | ◇ | ARC 11-023 1A80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y82) | △ | ARC 11-023 1A80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

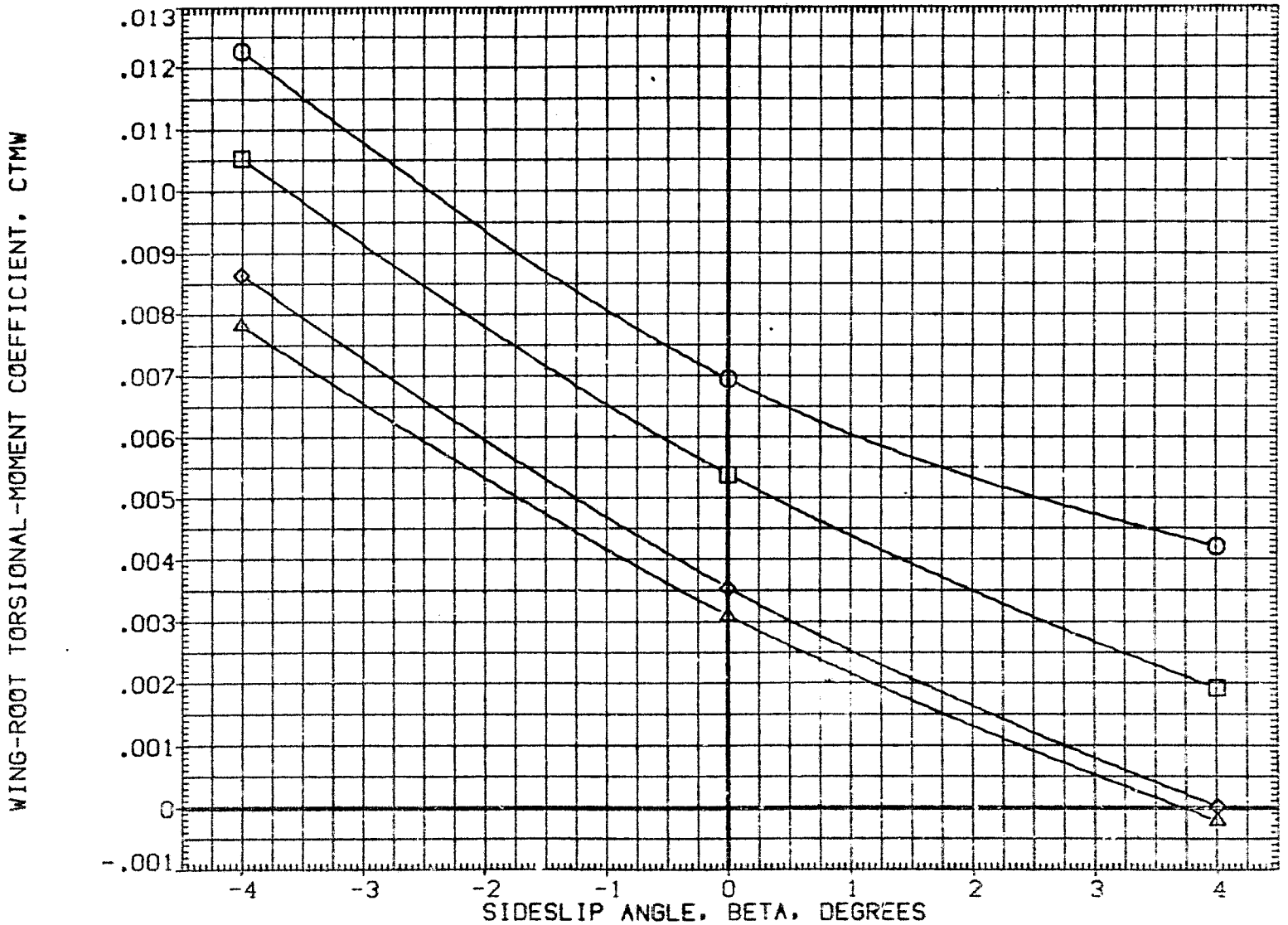



FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y23) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YA8) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4Y98) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4YB2) | ⧖ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

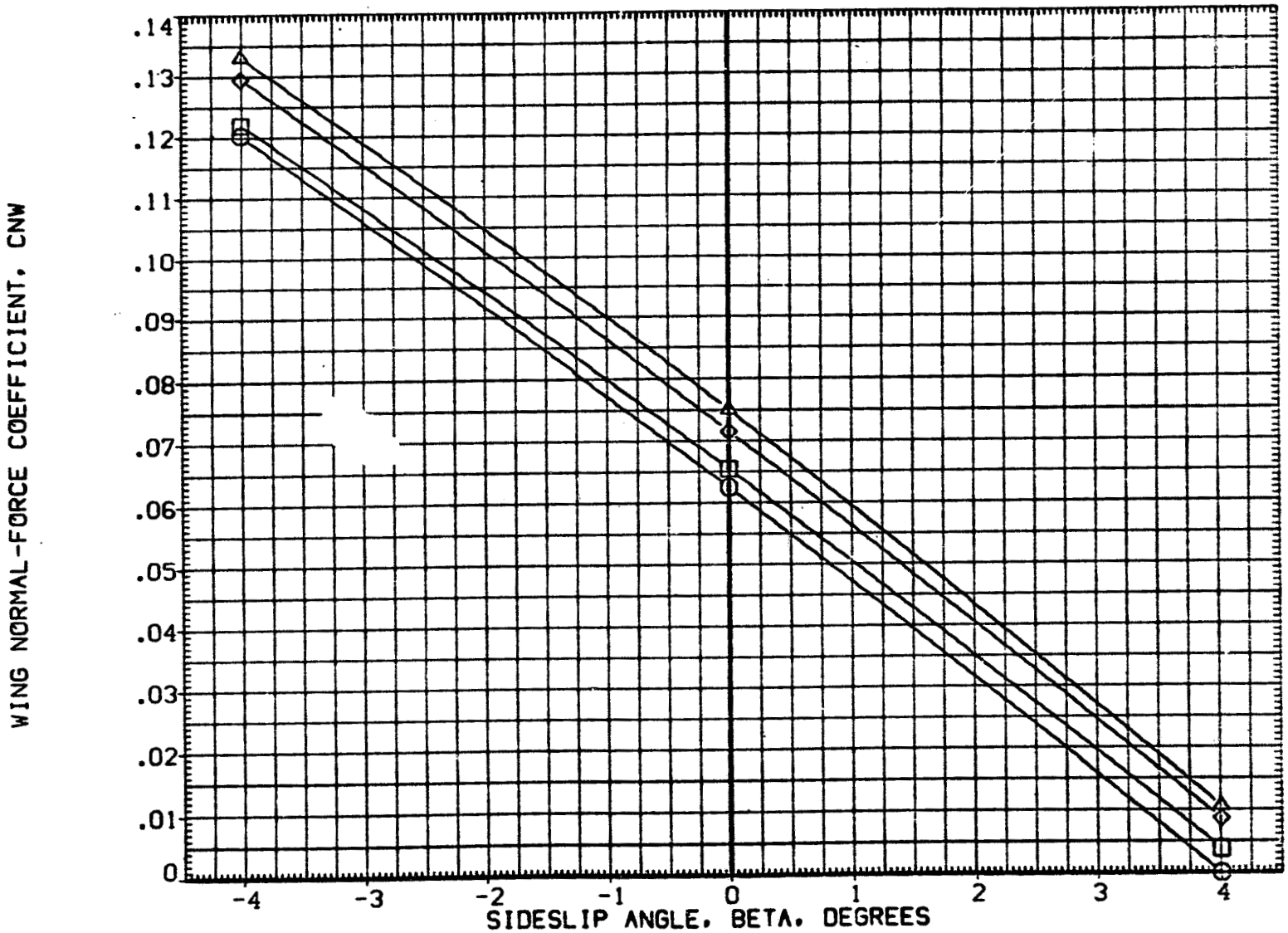



FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y23) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y61) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y72) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

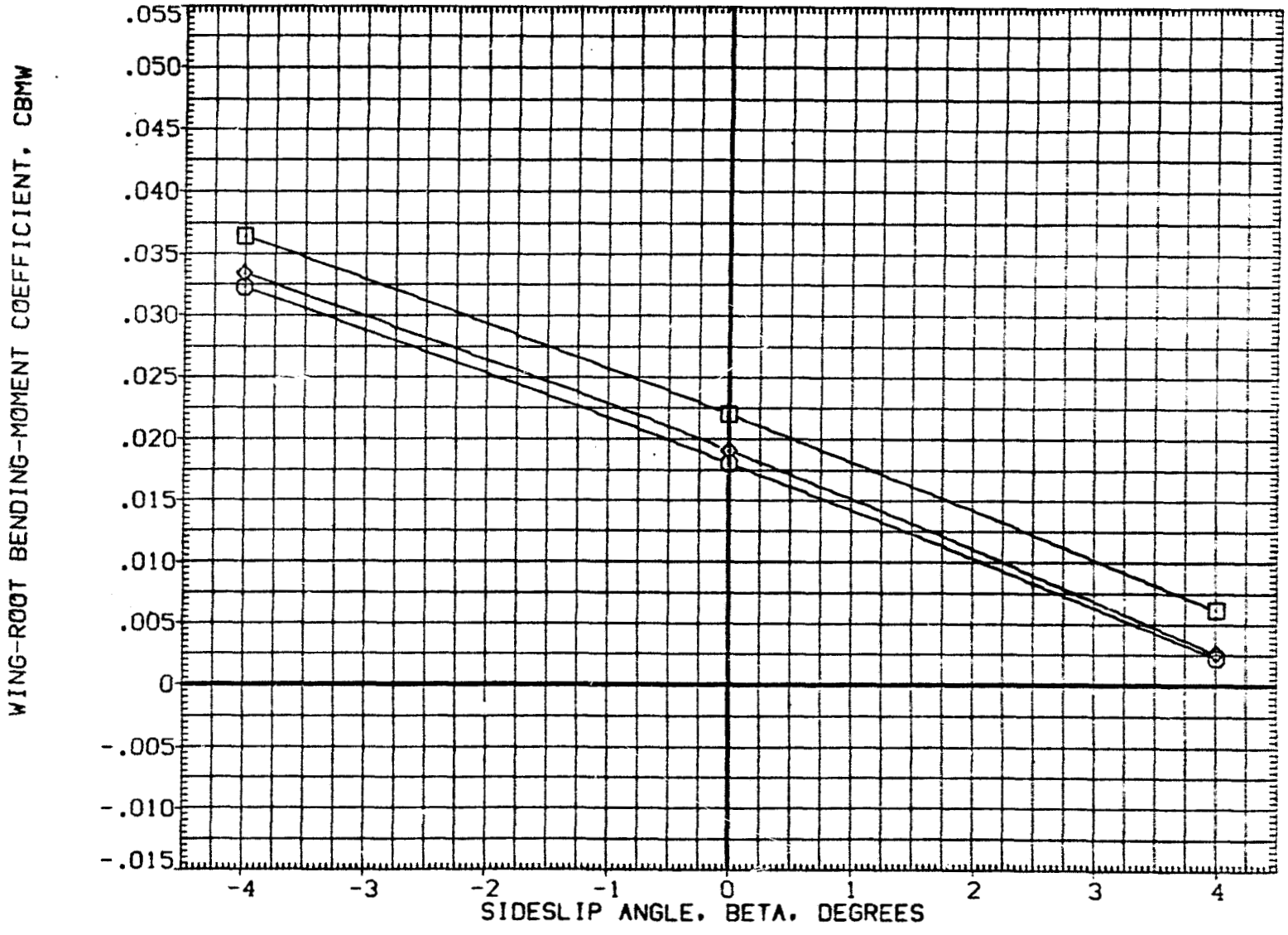



FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y23) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y61) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y72) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

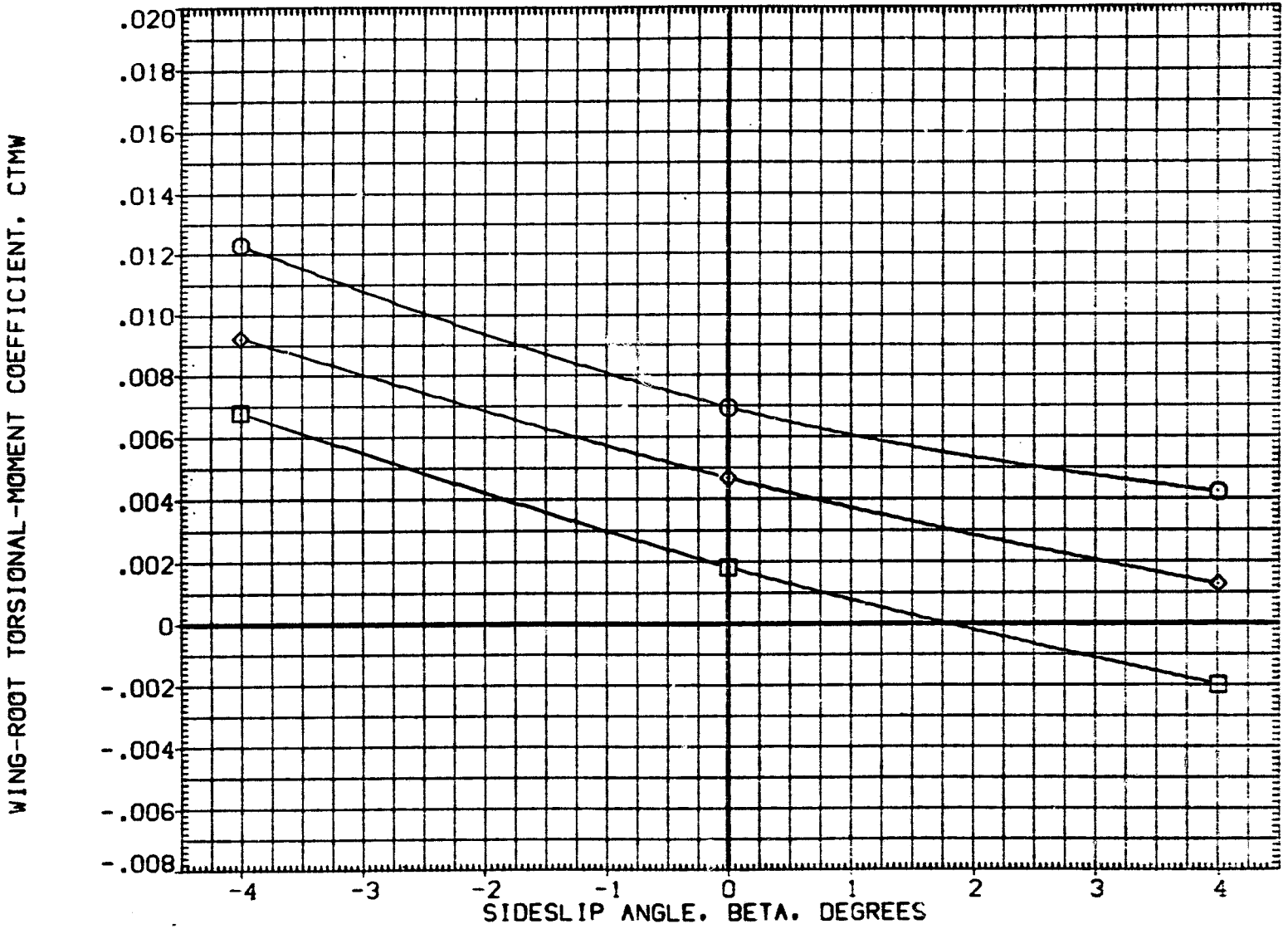



FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y23) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y61) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y72) ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

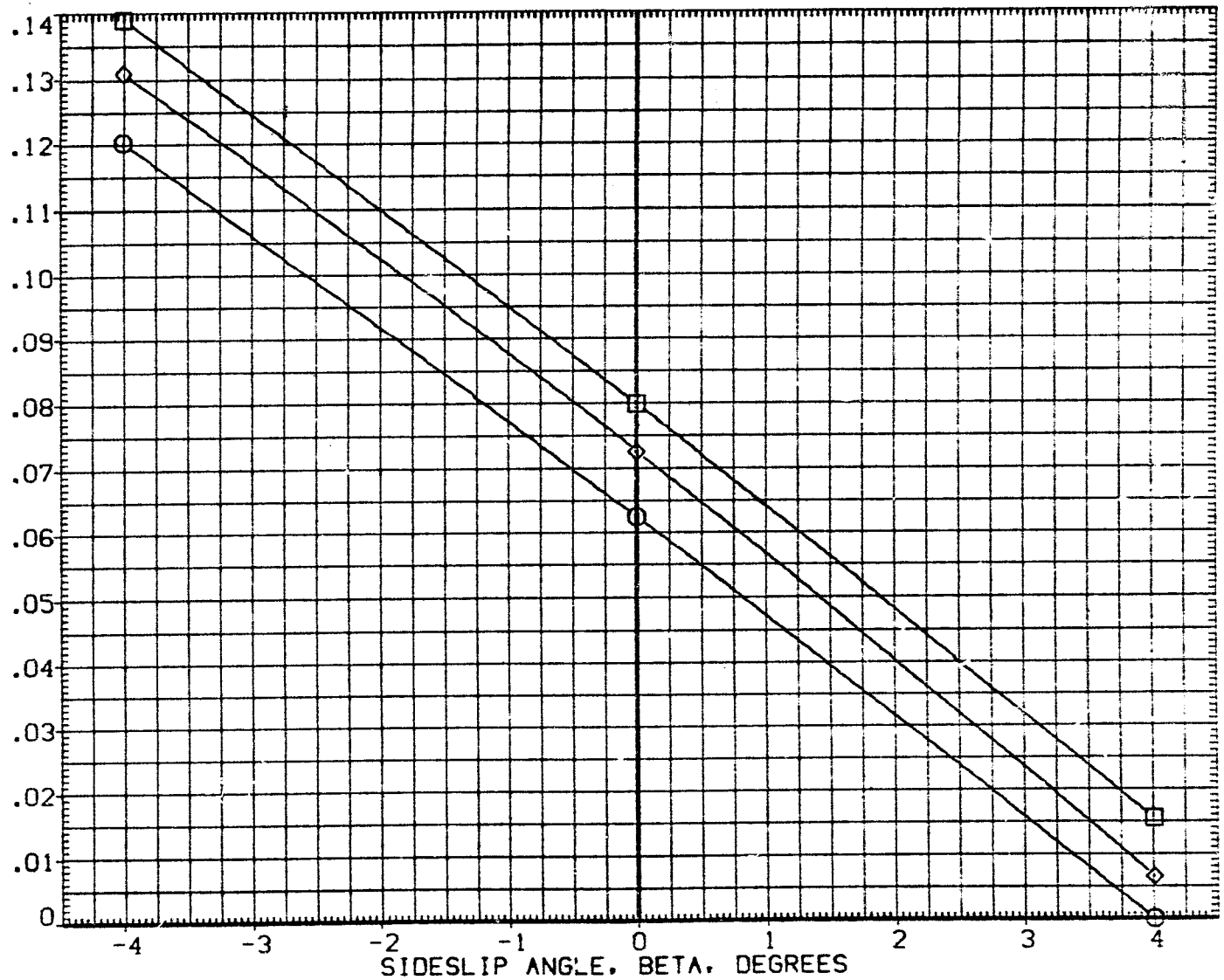



FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y24) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YA9) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4Y99) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y83) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

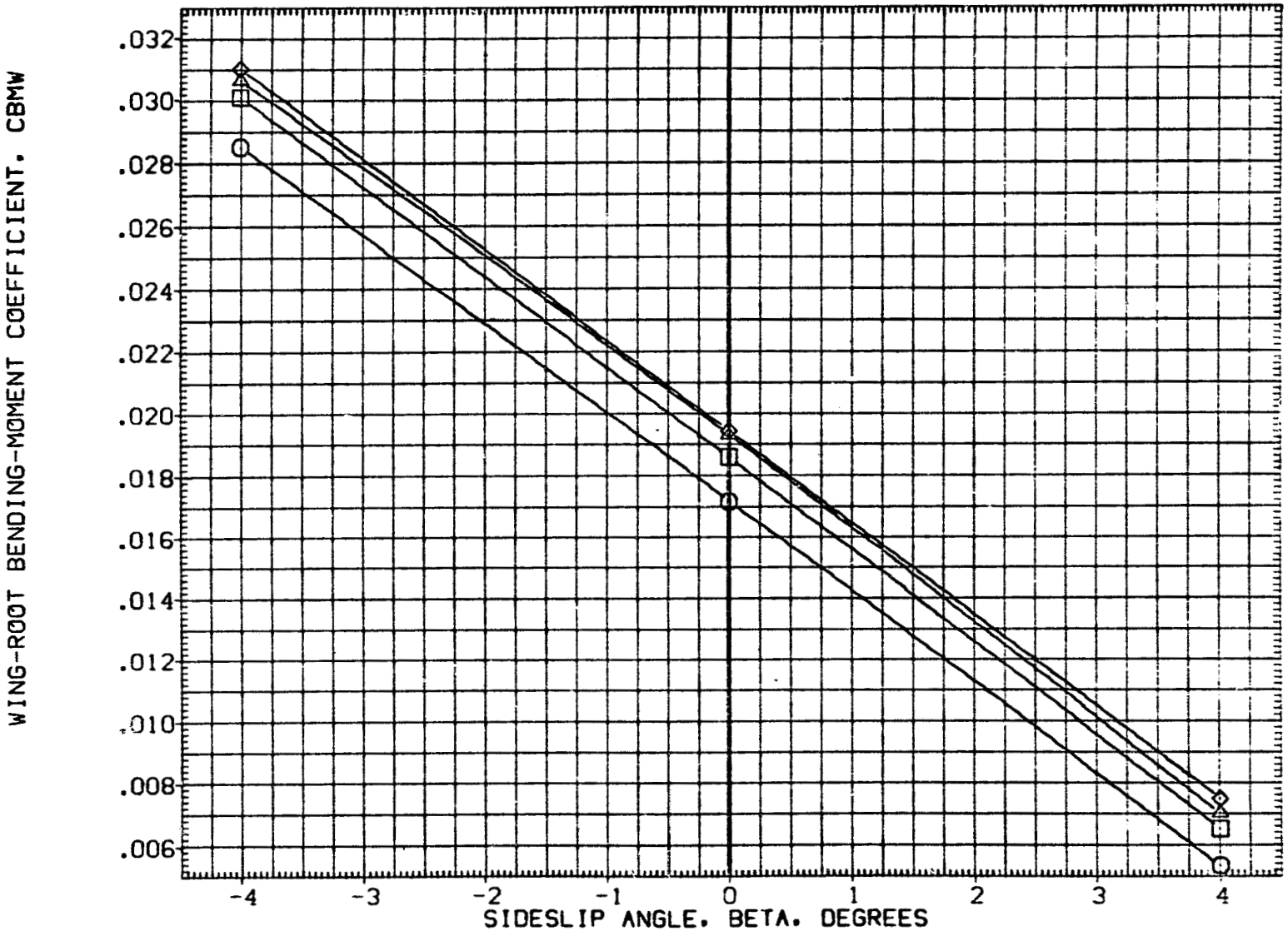



FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y24) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YA9) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4Y99) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y83) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

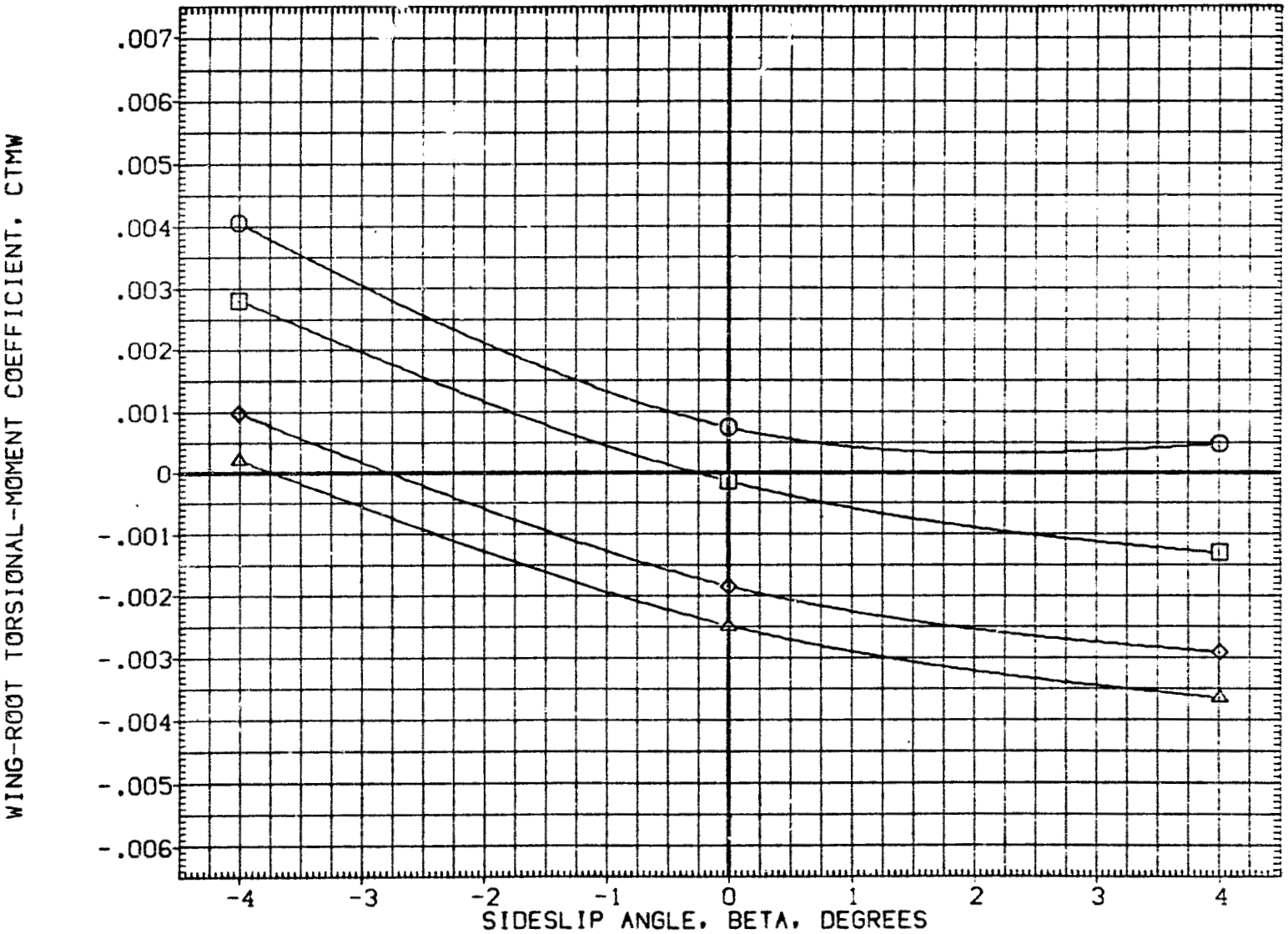



FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y24) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YA9) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4Y99) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y83) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

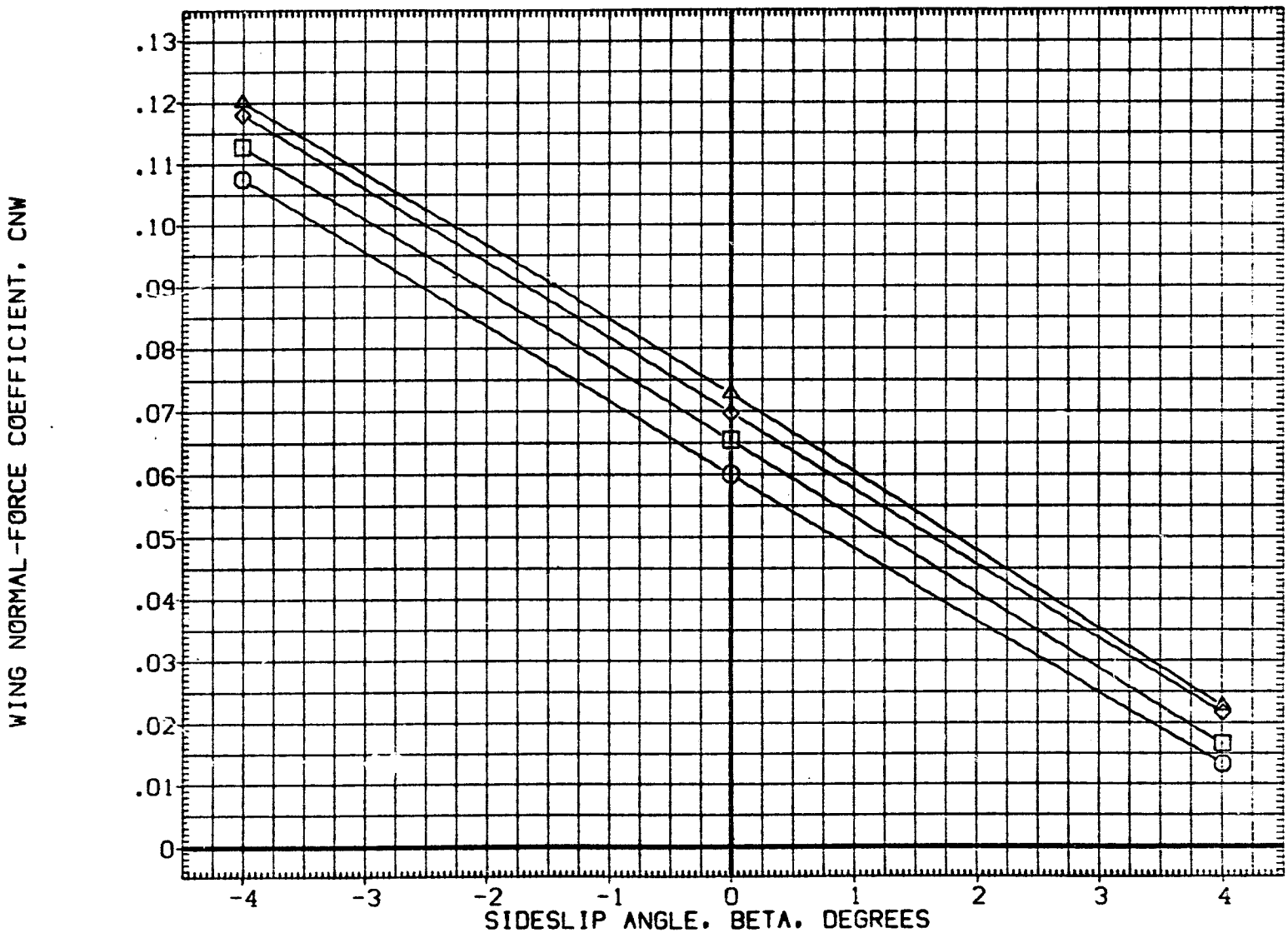



FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y24) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y62) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

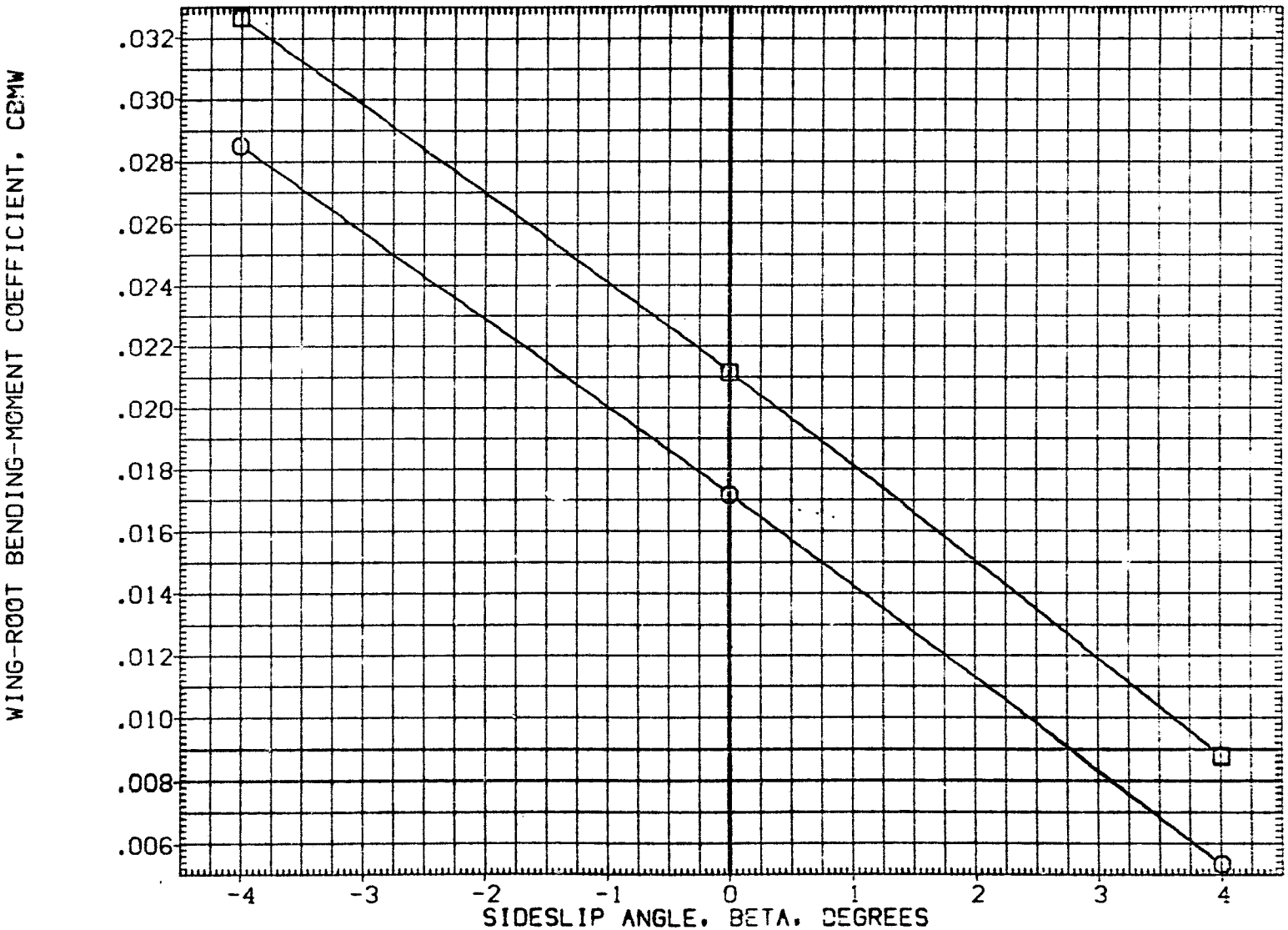



FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y24) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y62) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

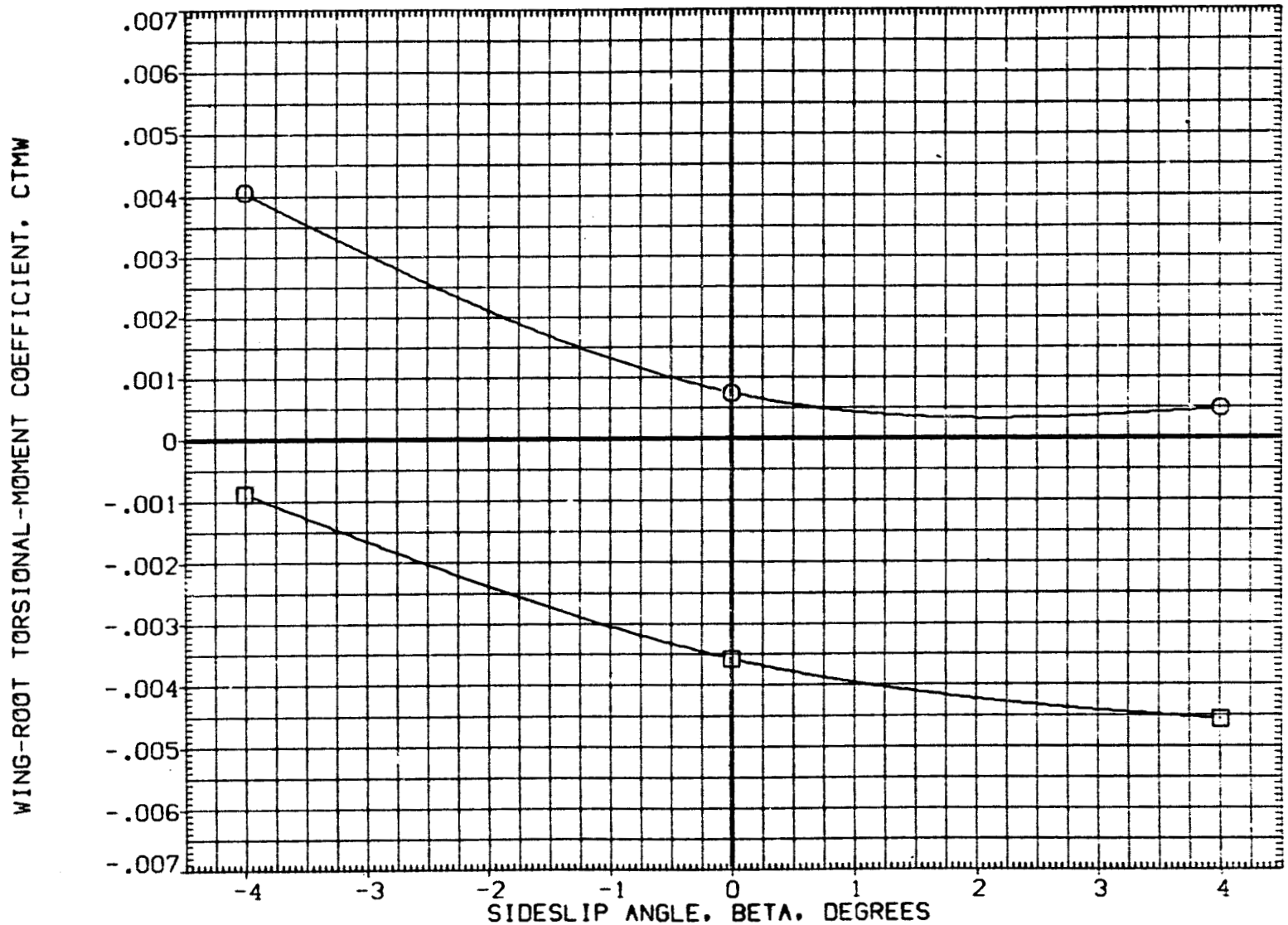



FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y24) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y62) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

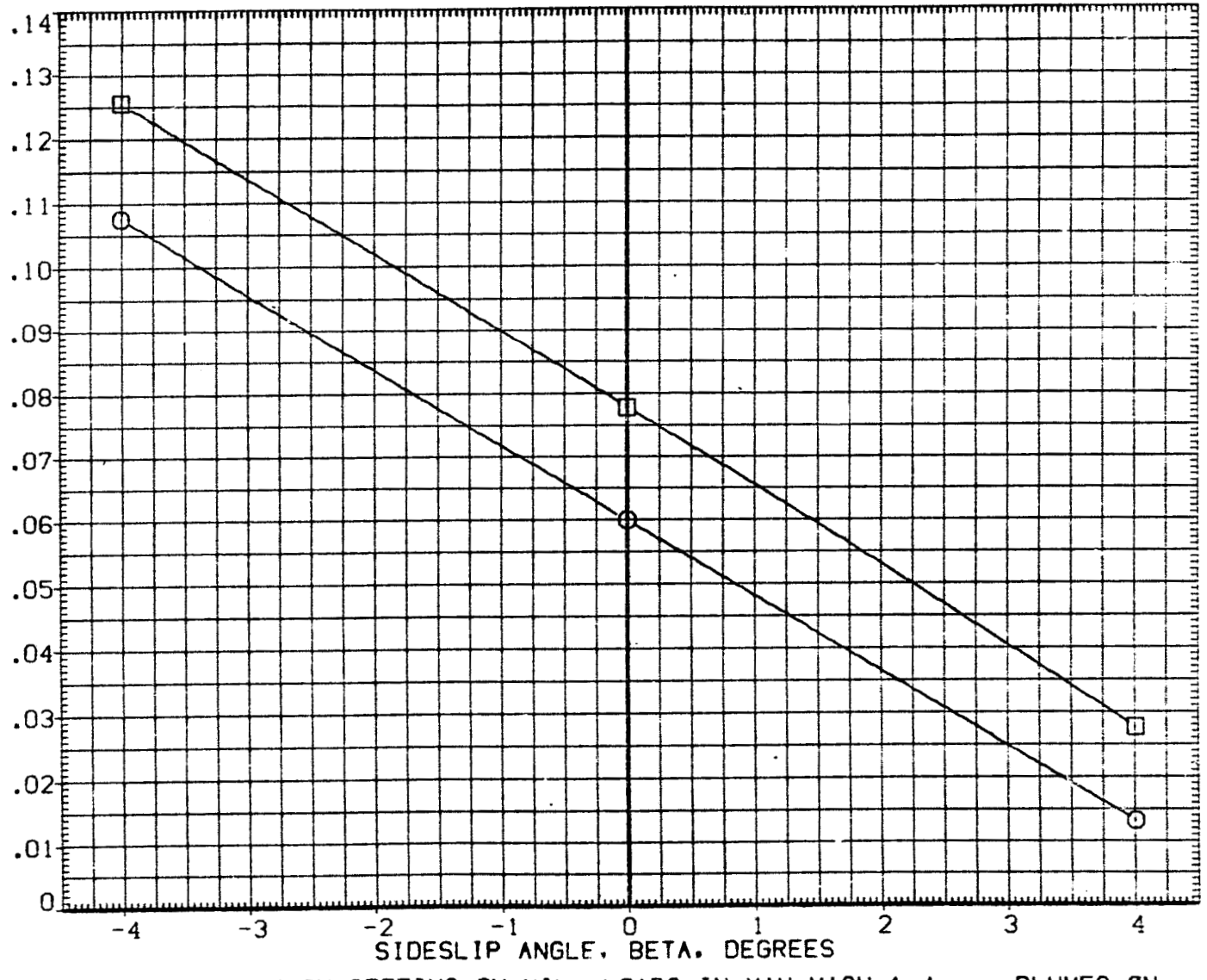



FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4YA5) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .600 | 3.400 |
| (RE4Y95) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4Y79) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

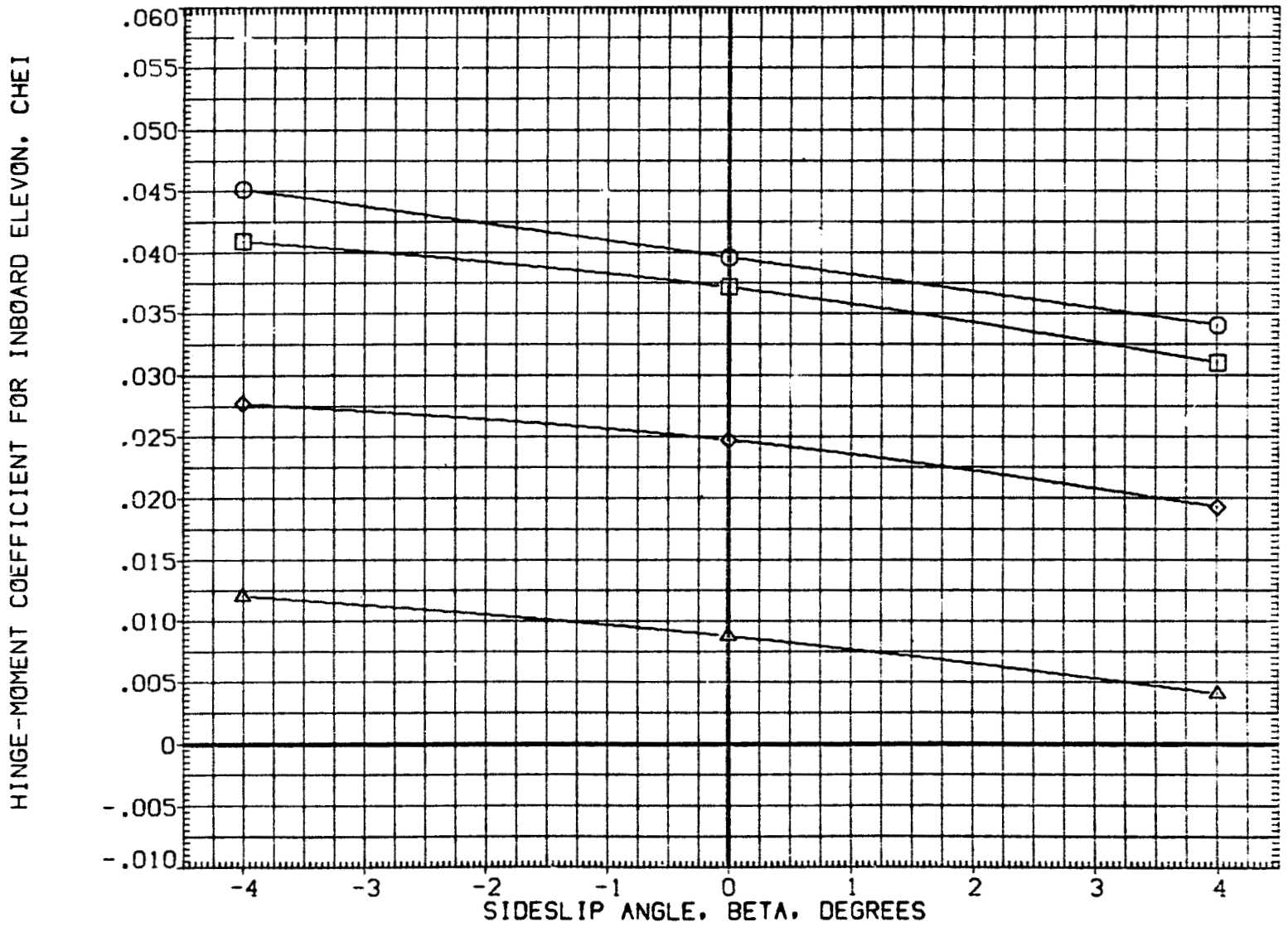



FIG. 39 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.6 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4YA5) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .600 | 3.400 |
| (RE4Y95) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .600 | 3.400 |
| (RE4Y79) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

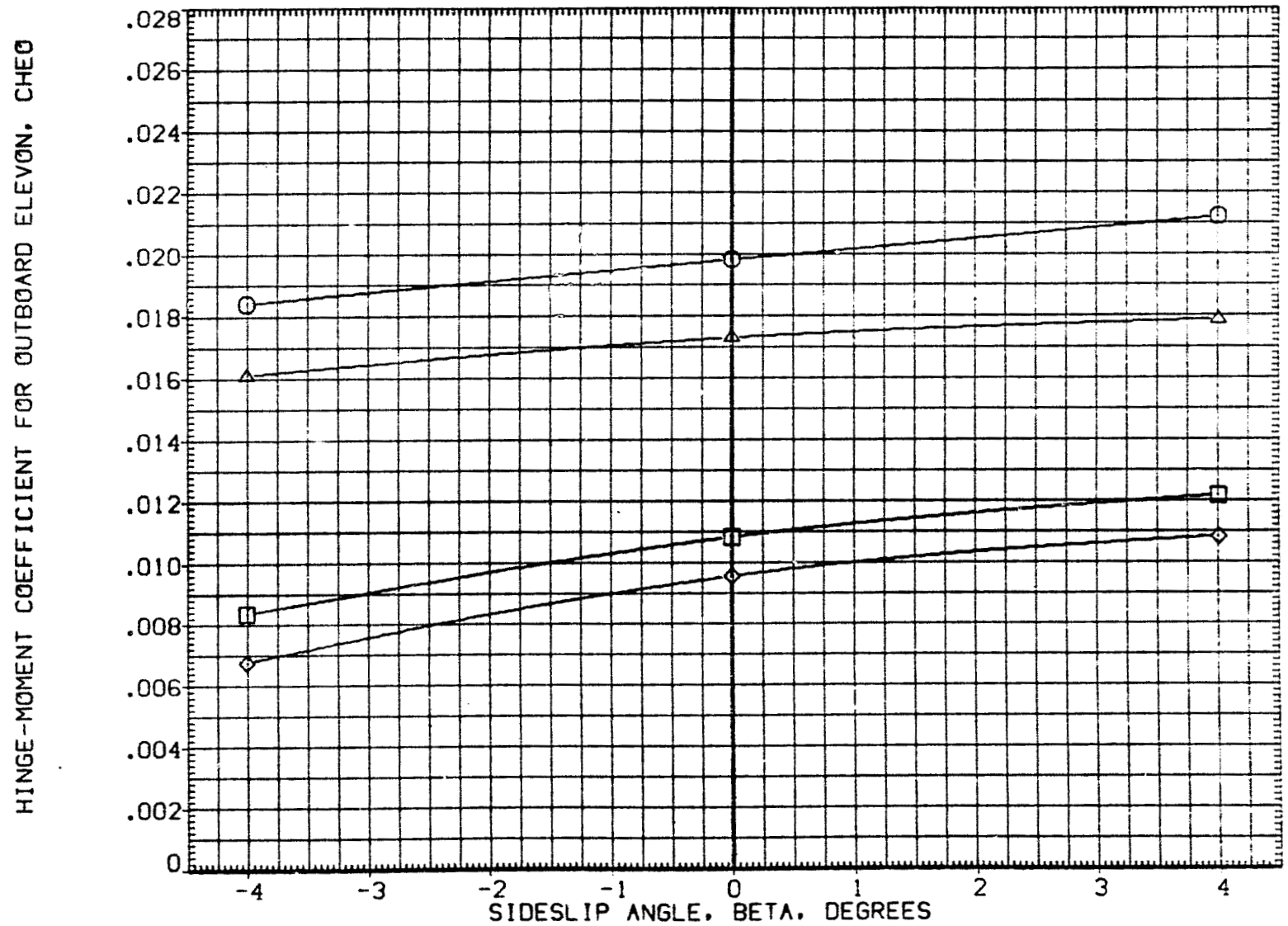



FIG. 39 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.6 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y87) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4Y58) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4Y69) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

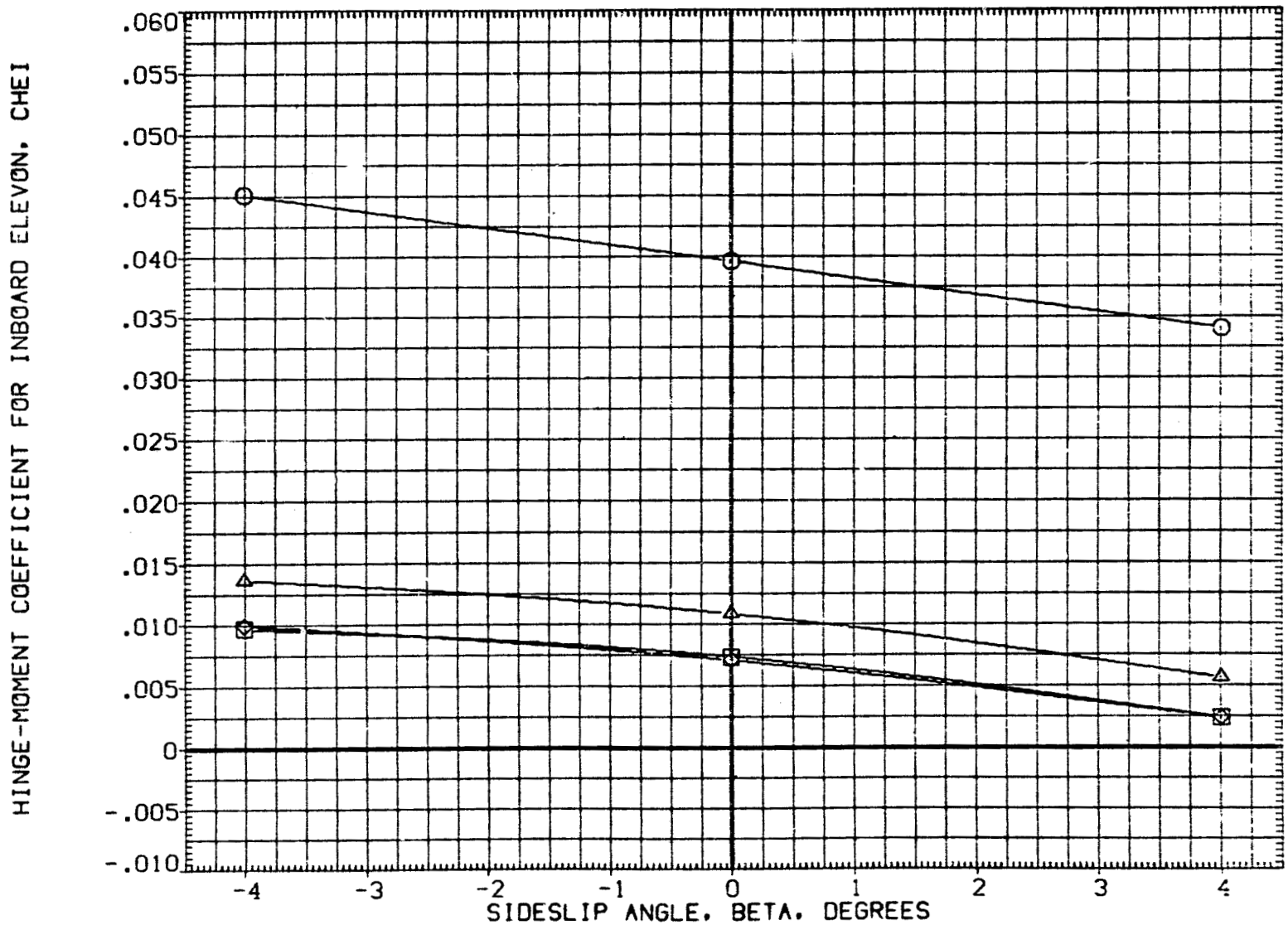



FIG. 39 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.6 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y87) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .600 | 3.400 |
| (RE4Y58) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .600 | 3.400 |
| (RE4Y69) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

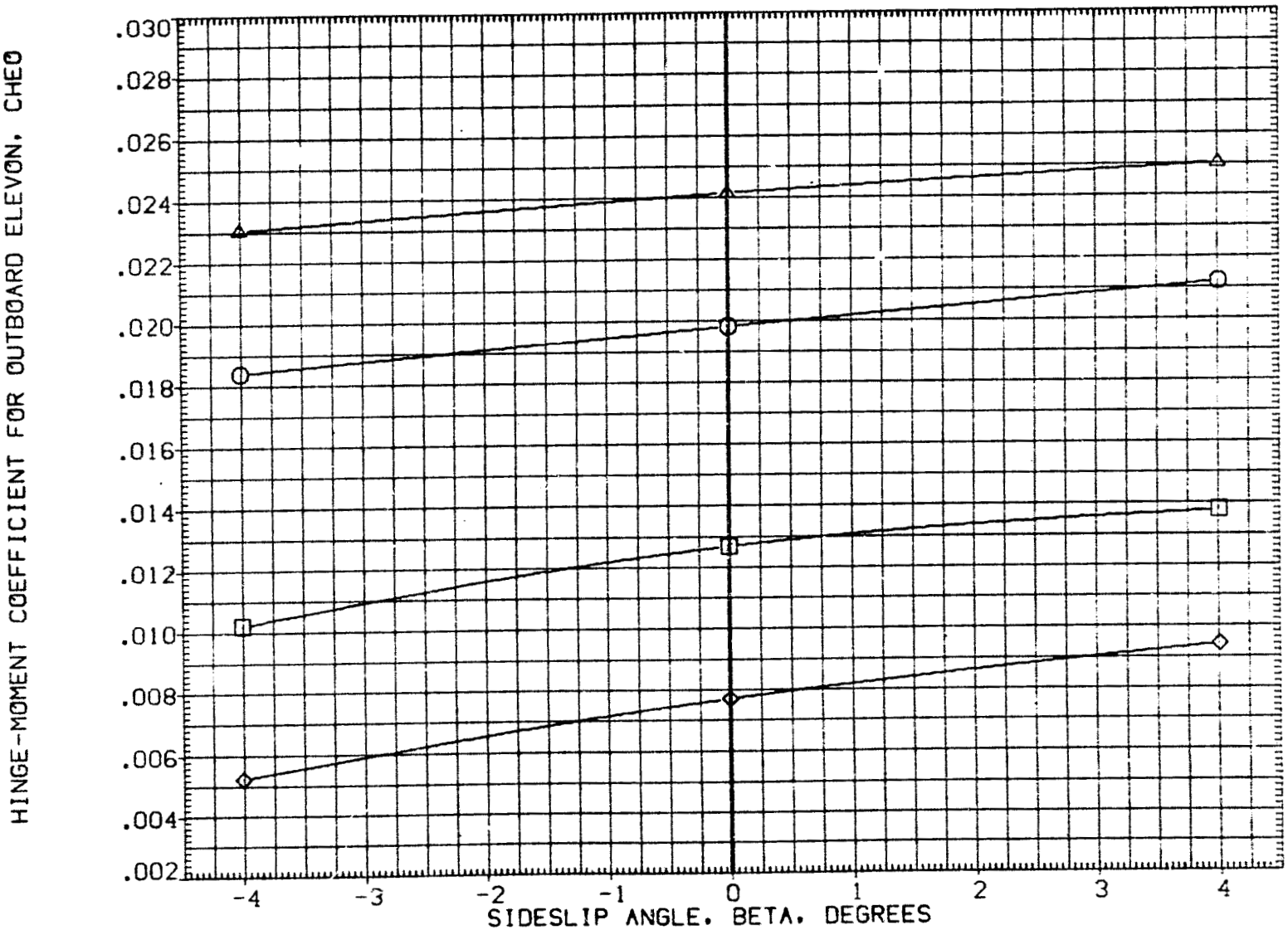



FIG. 39 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.6 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4YA6) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .900 | 4.250 |
| (RE4Y96) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4Y80) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

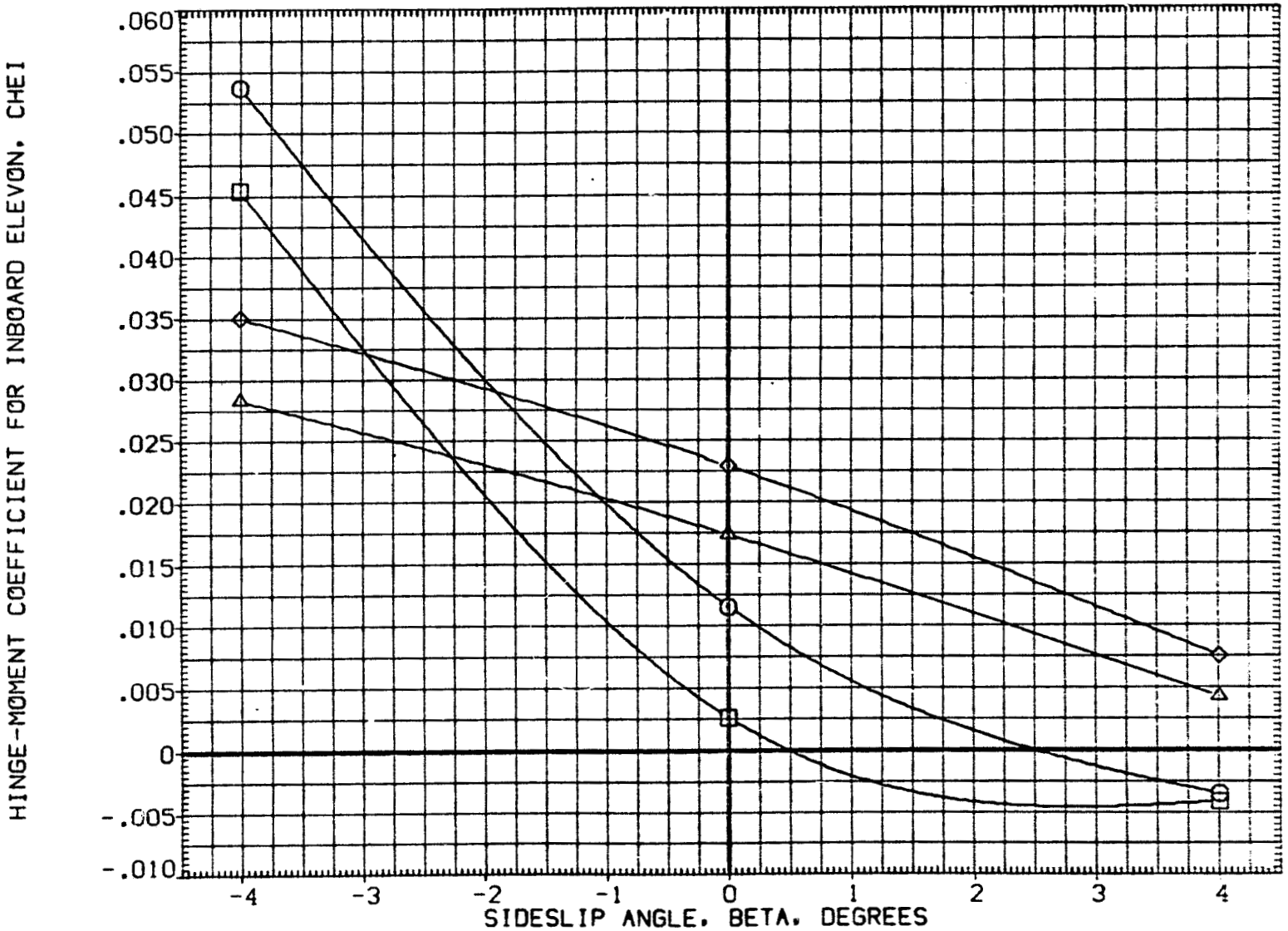



FIG. 40 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.9 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4YA6) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .900 | 4.250 |
| (RE4Y96) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .900 | 4.250 |
| (RE4Y80) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

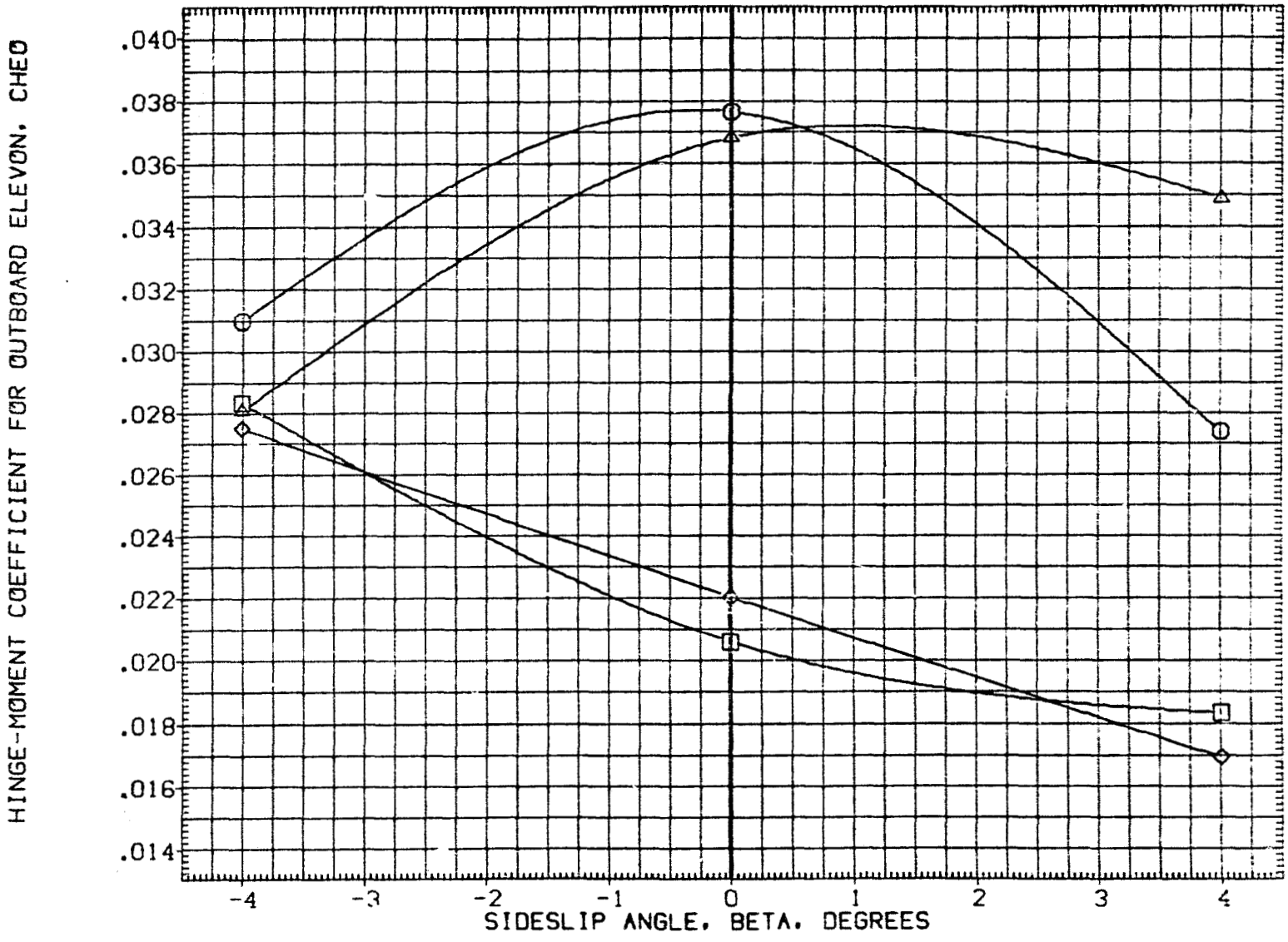



FIG. 40 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.9 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y88) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4Y59) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4Y70) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .900 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

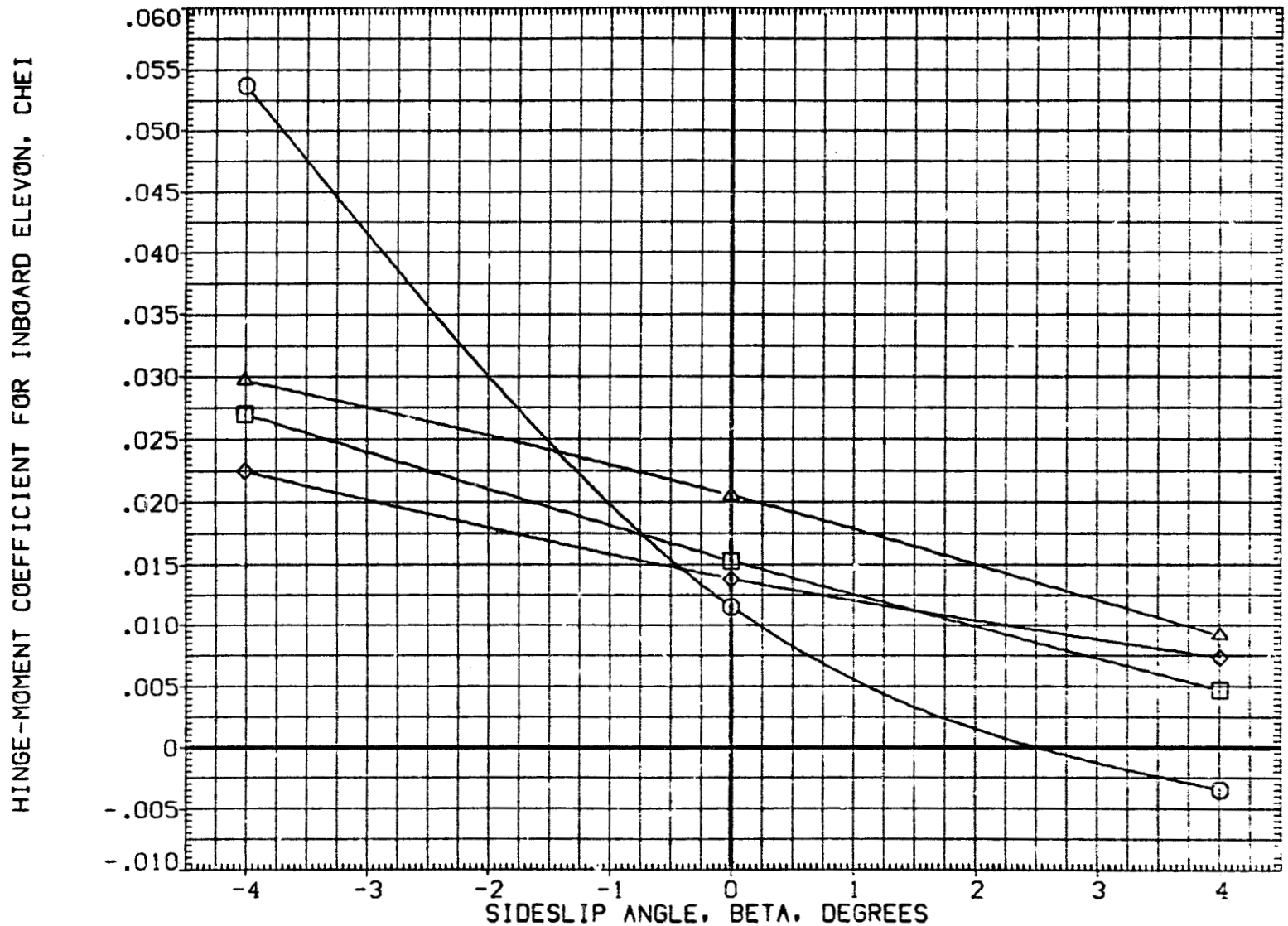



FIG. 40 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.9 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y88) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .900 | 4.250 |
| (RE4Y59) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .900 | 4.250 |
| (RE4Y70) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

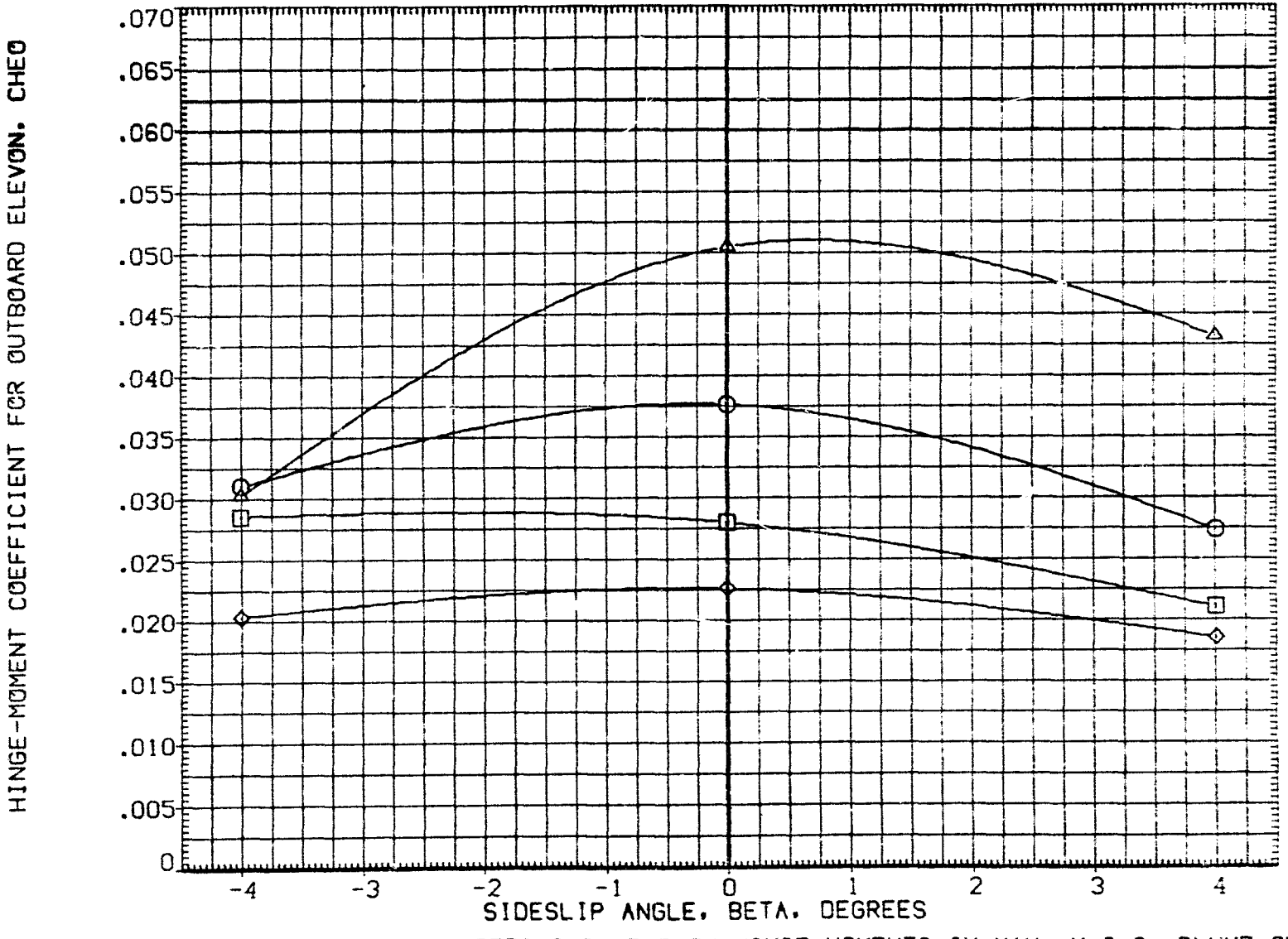



FIG. 40 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.9 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YA7) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.100 | 4.250 |
| (RE4Y97) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y81) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

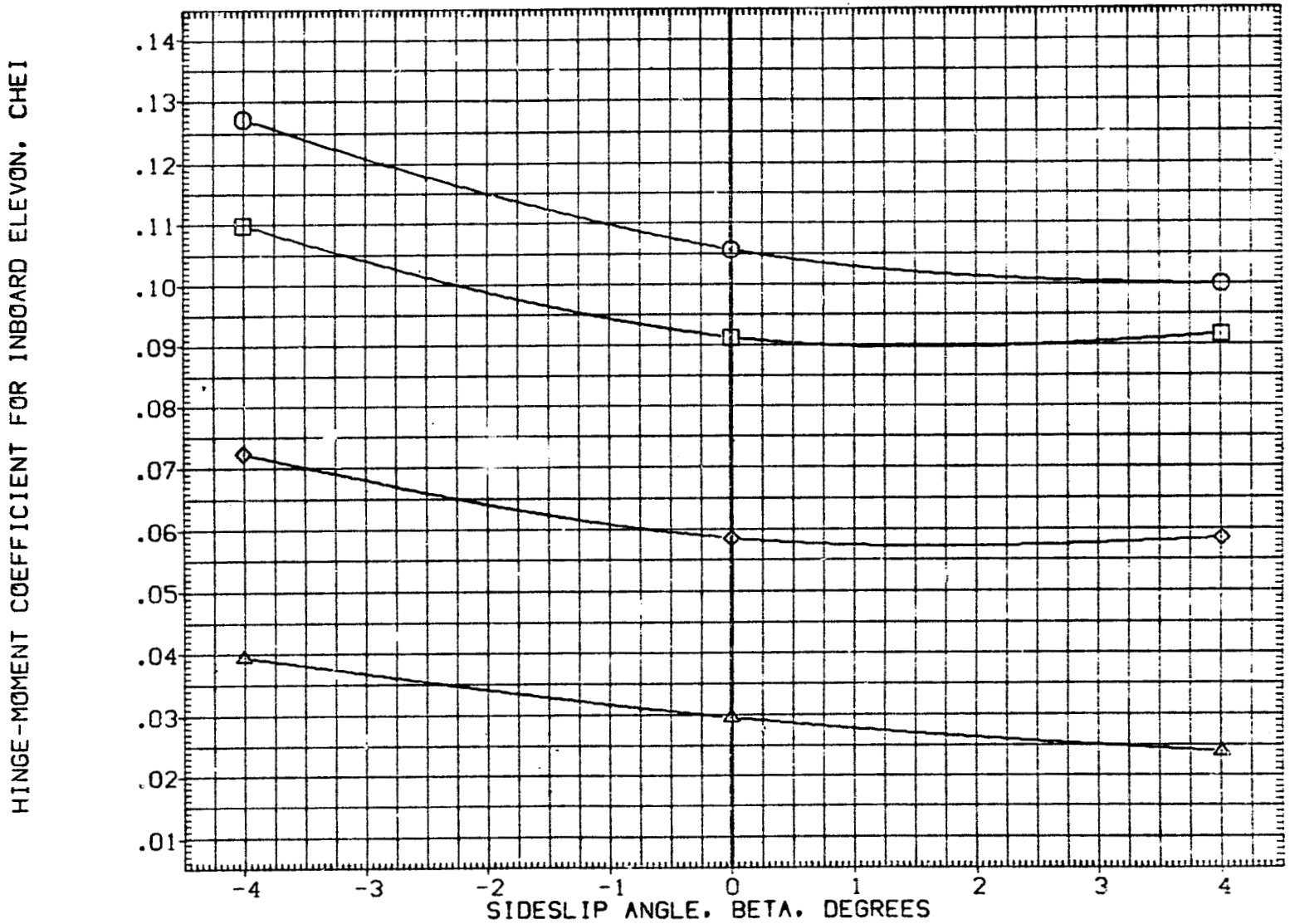



FIG. 41 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.1 PLUME ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | [illegible] |
|---|---|---|---|---|---|
| (RE4Y22) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | .50 |
| (RE4YA7) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.100 | .250 |
| (RE4Y97) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y81) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

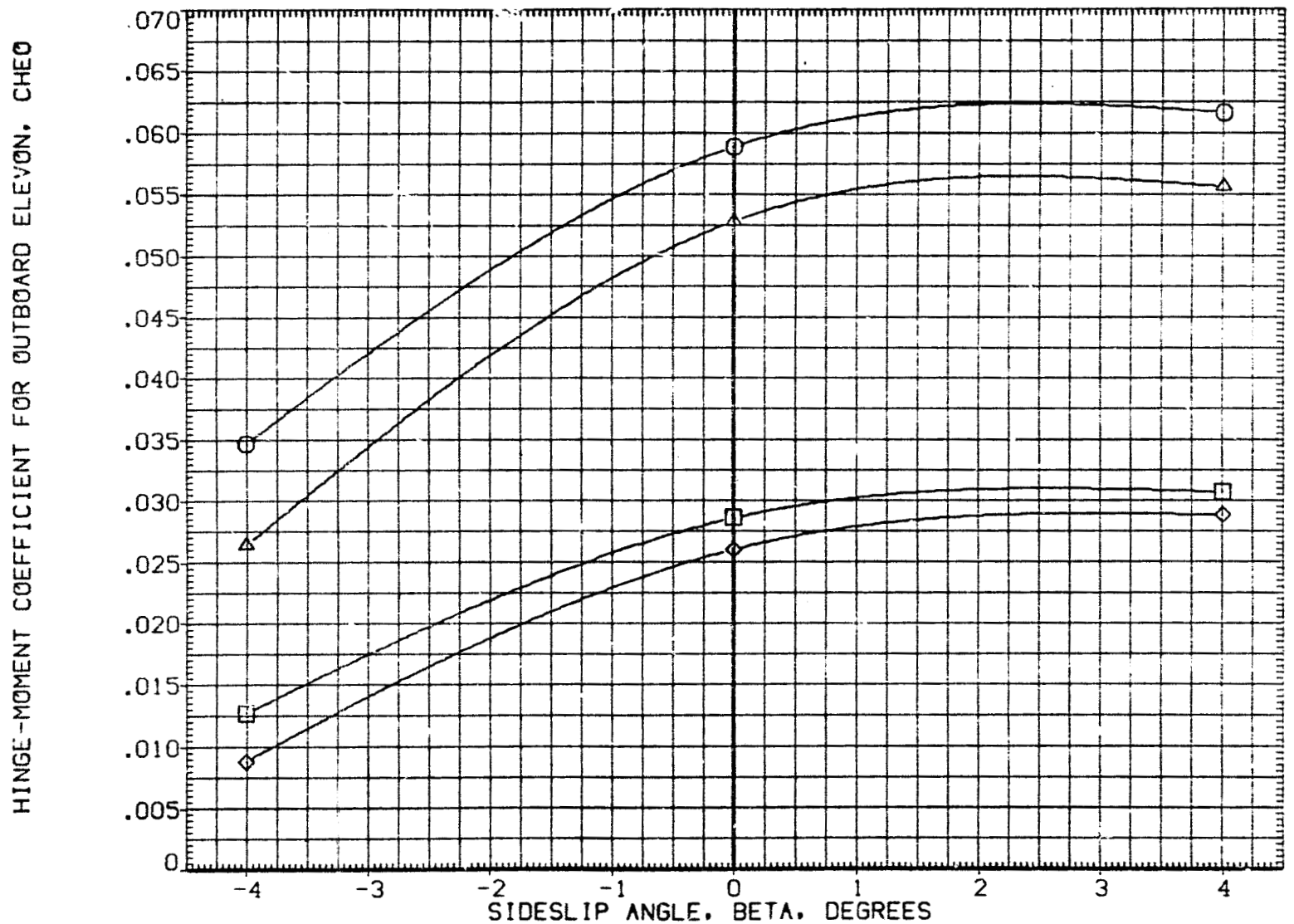



FIG. 41 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.1 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y89) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | 1.100 | 4.250 |
| (RE4Y60) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y71) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

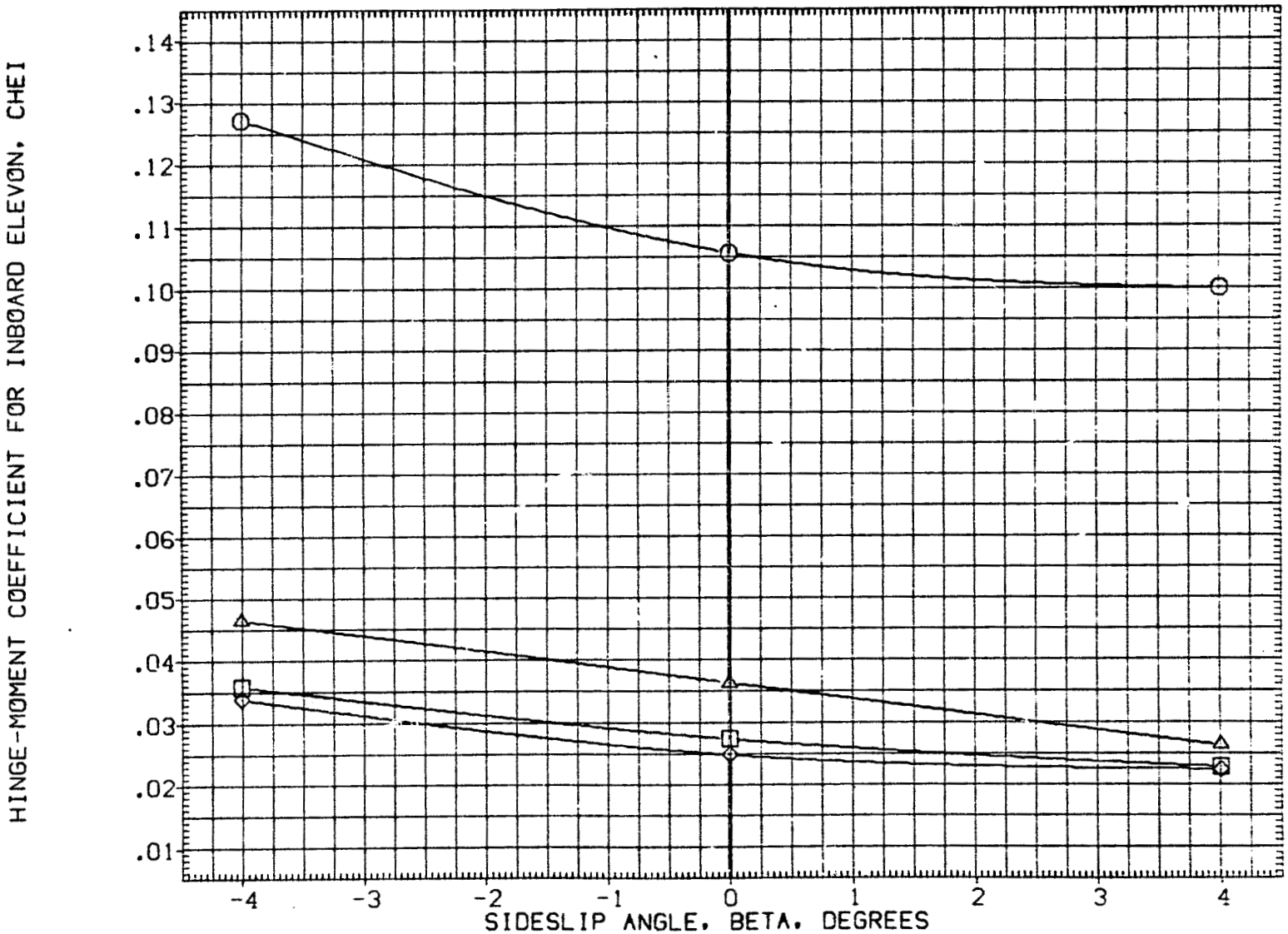



FIG. 41 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.1 PLUME ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y22) | ARC 11-023 IABO OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y89) | ARC 11-023 IABO OTS (SRB NOM ) (SSME NOM ) | 9.000 | 2.000 | 1.100 | 4.250 |
| (RE4Y60) | ARC 11-023 IABO OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.100 | 4.250 |
| (RE4Y71) | ARC 11-023 IABO OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

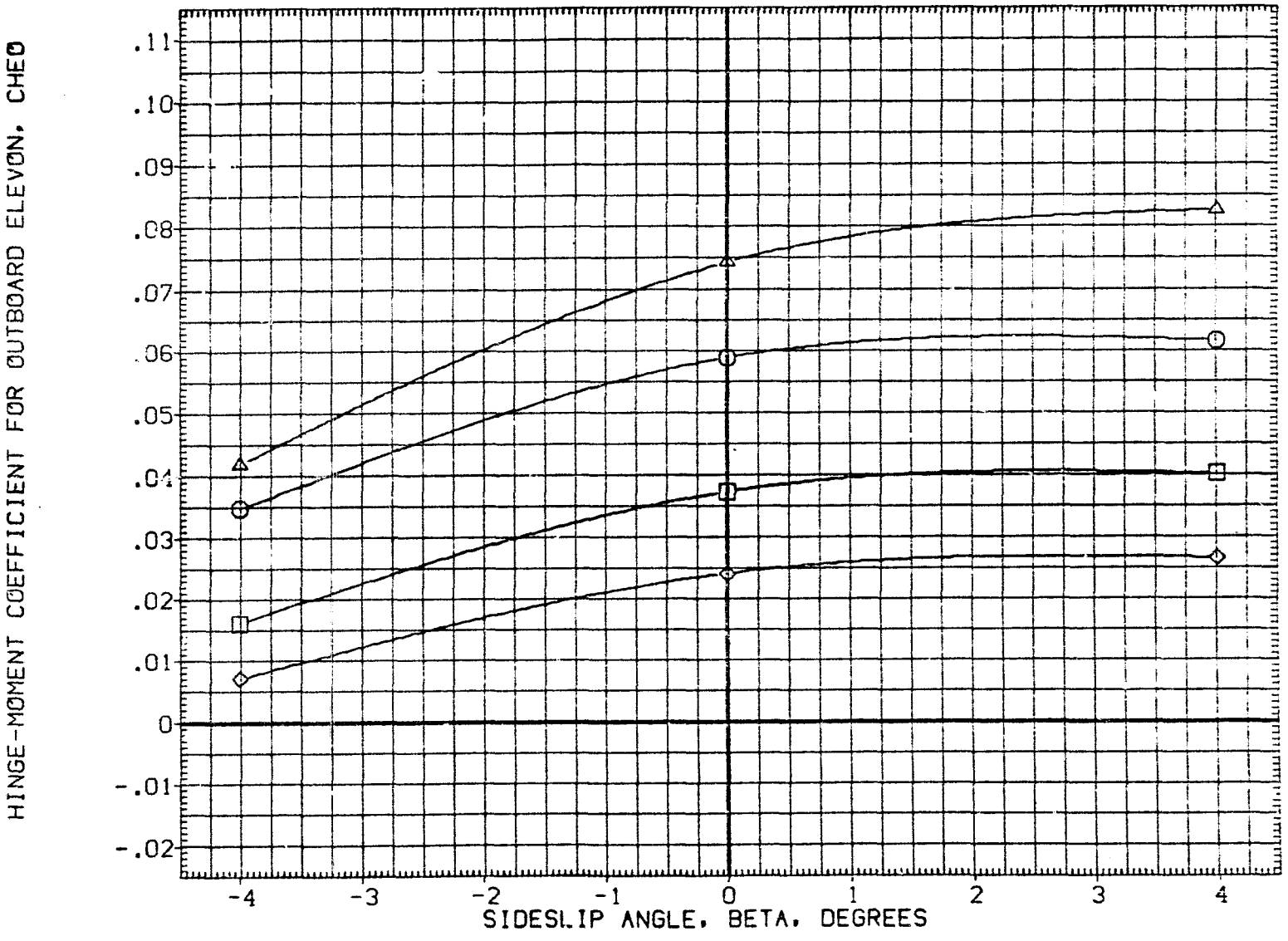



FIG. 41 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.1 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y23) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YA8) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4Y98) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y82) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

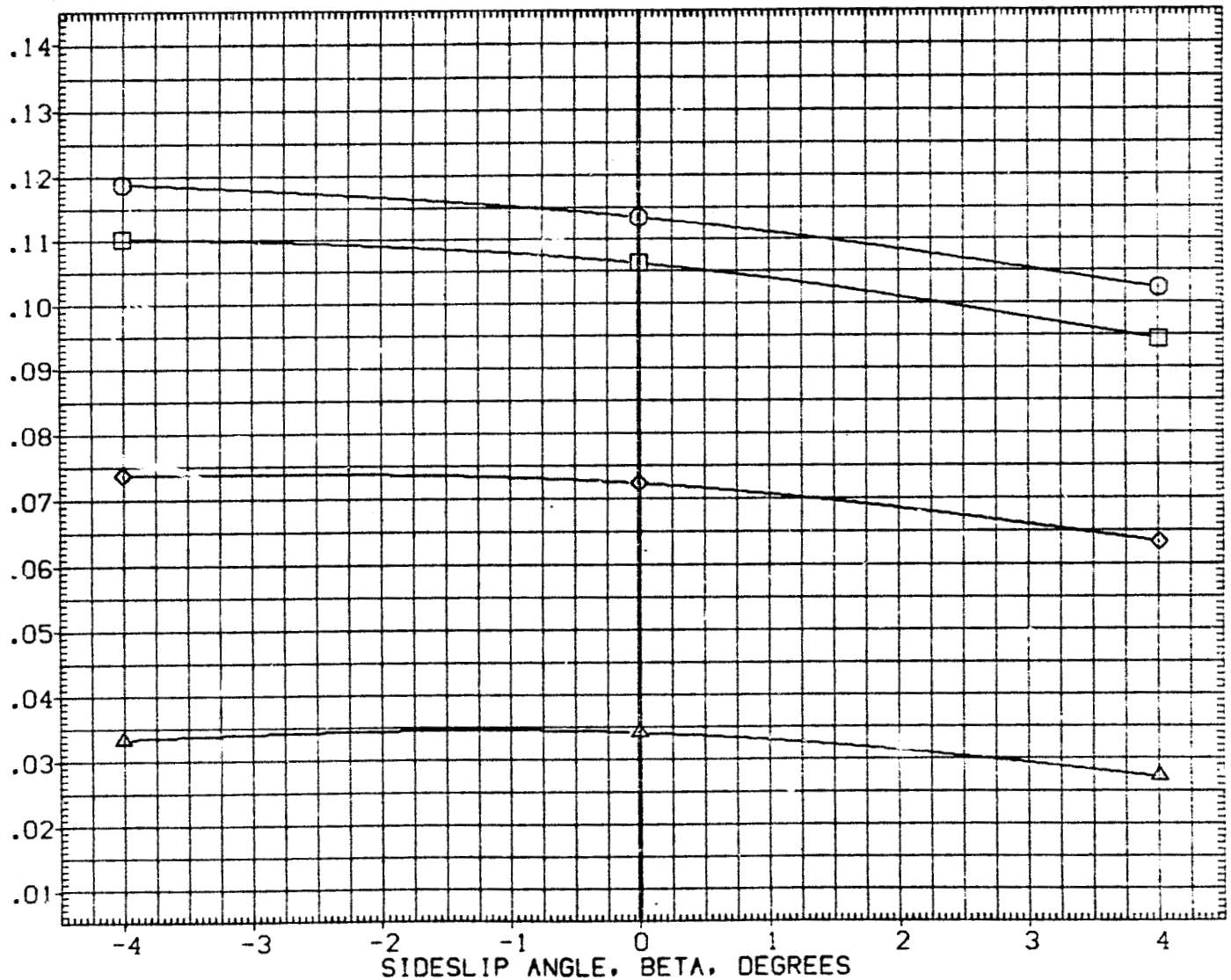



FIG. 42 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.25 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y23) | ○ | ARC 11-023 IA8Q OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YA8) | □ | ARC 11-023 IA8Q OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.250 | 4.250 |
| (RE4Y98) | ◇ | ARC 11-023 IA8Q OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y82) | △ | ARC 11-023 IA8Q OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

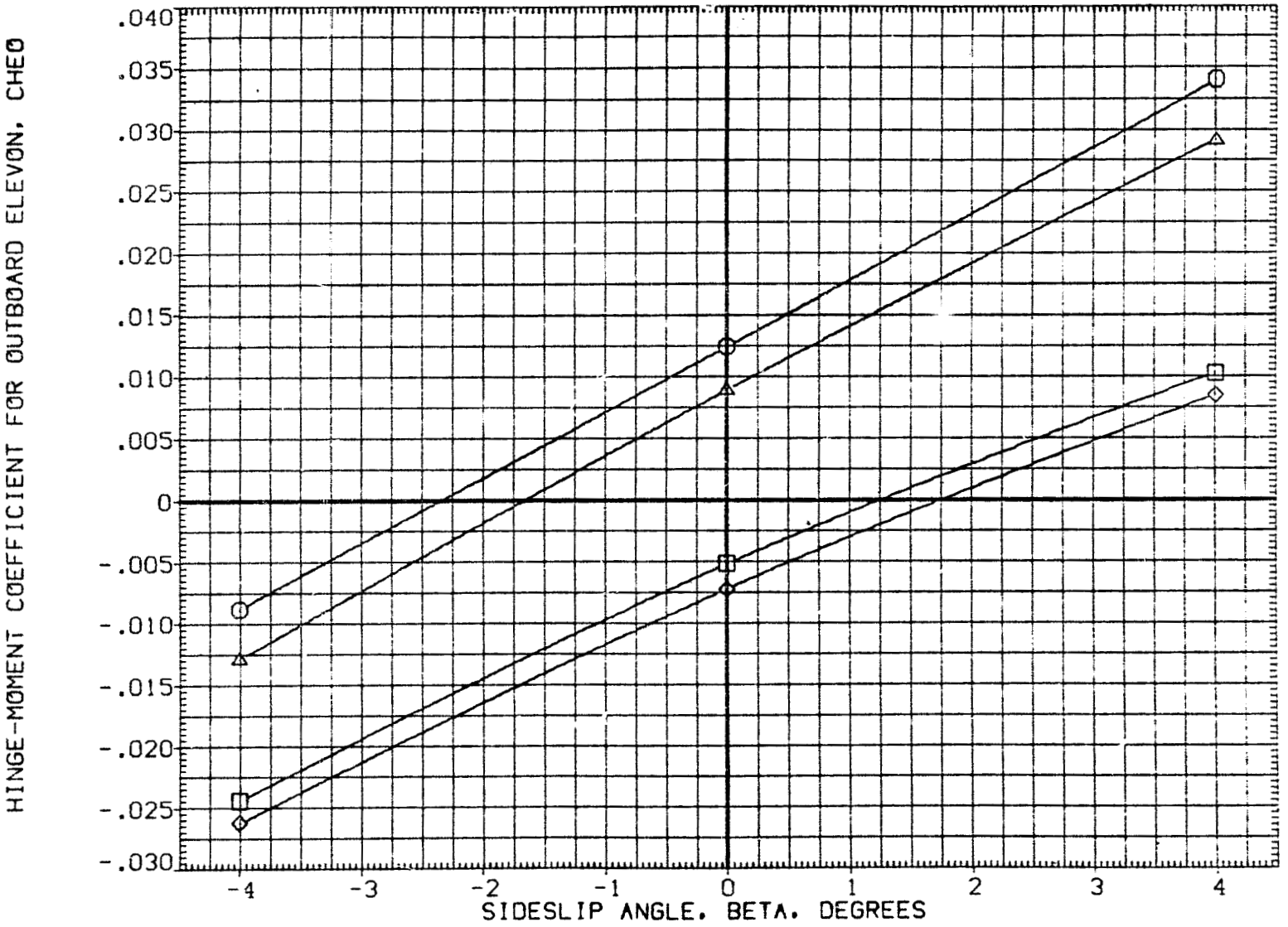



FIG. 42 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.25 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y23) | ○ | ARC 11-023 IA80 0TS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y61) | □ | ARC 11-023 IA80 0TS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y72) | ◇ | ARC 11-023 IA80 0TS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

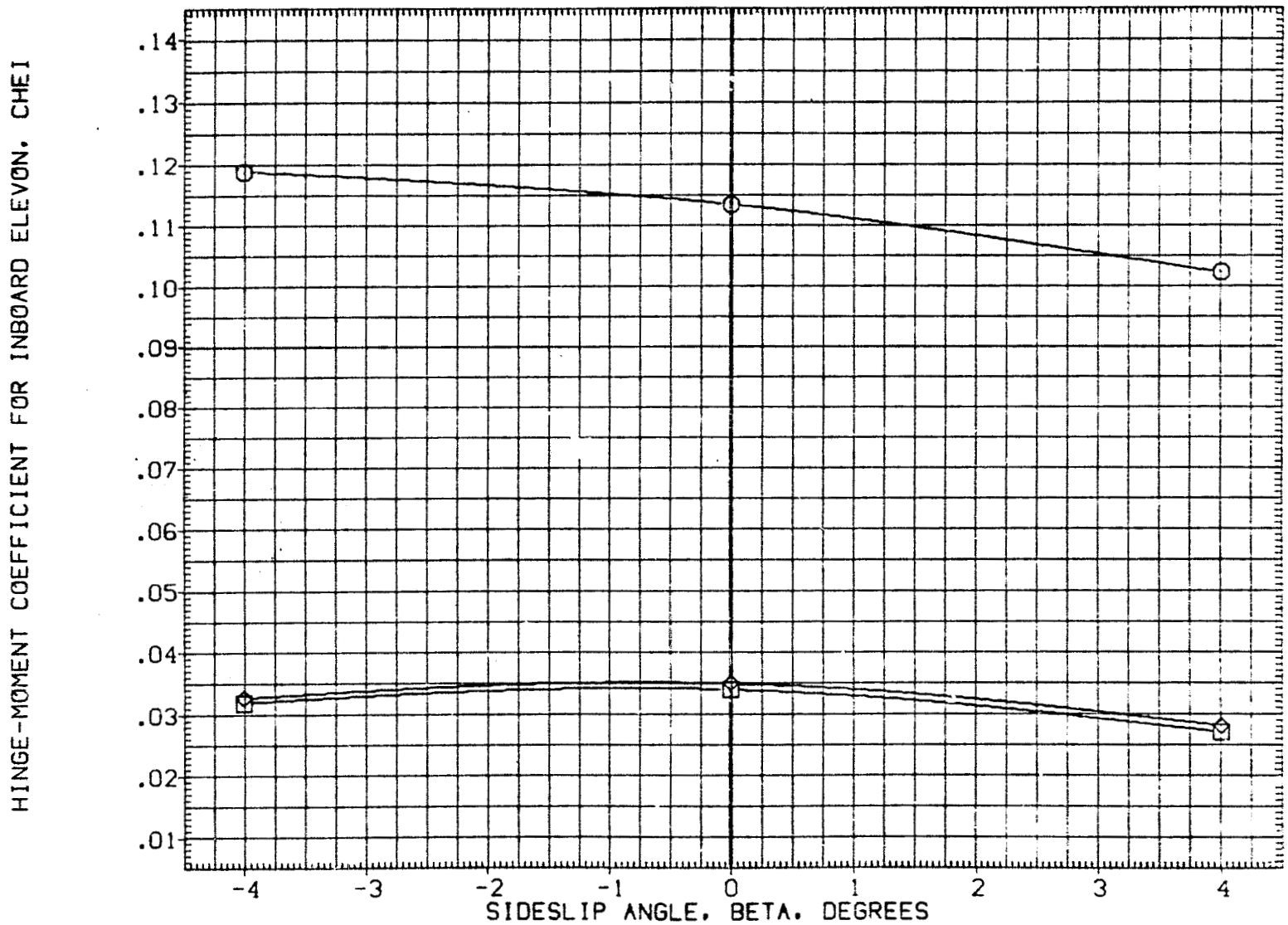



FIG. 42 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.25 PLUME ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y23) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y61) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.250 | 4.250 |
| (RE4Y72) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

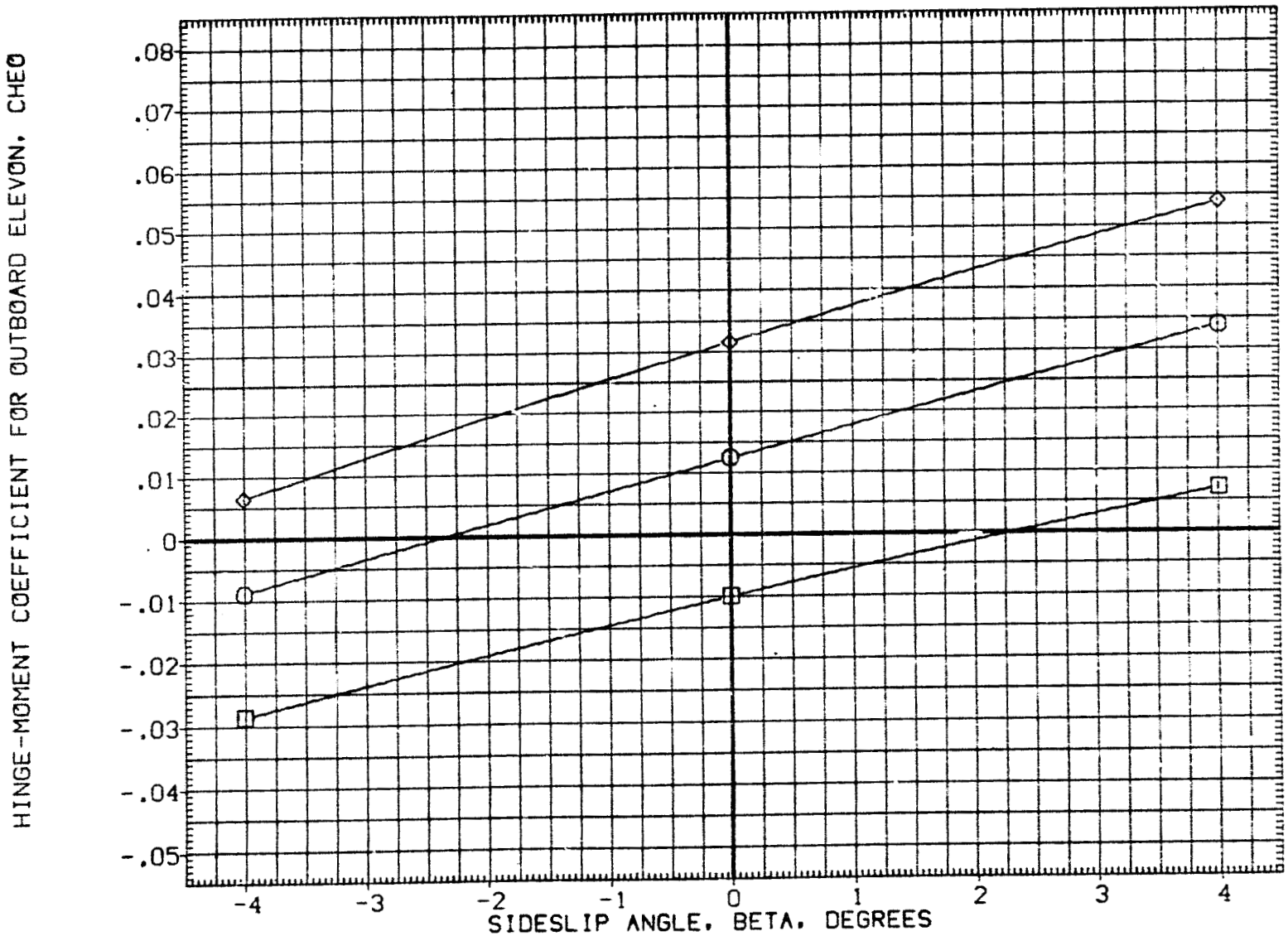



FIG. 42 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, 1.25 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y89) | ◫ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4Y99) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y83) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

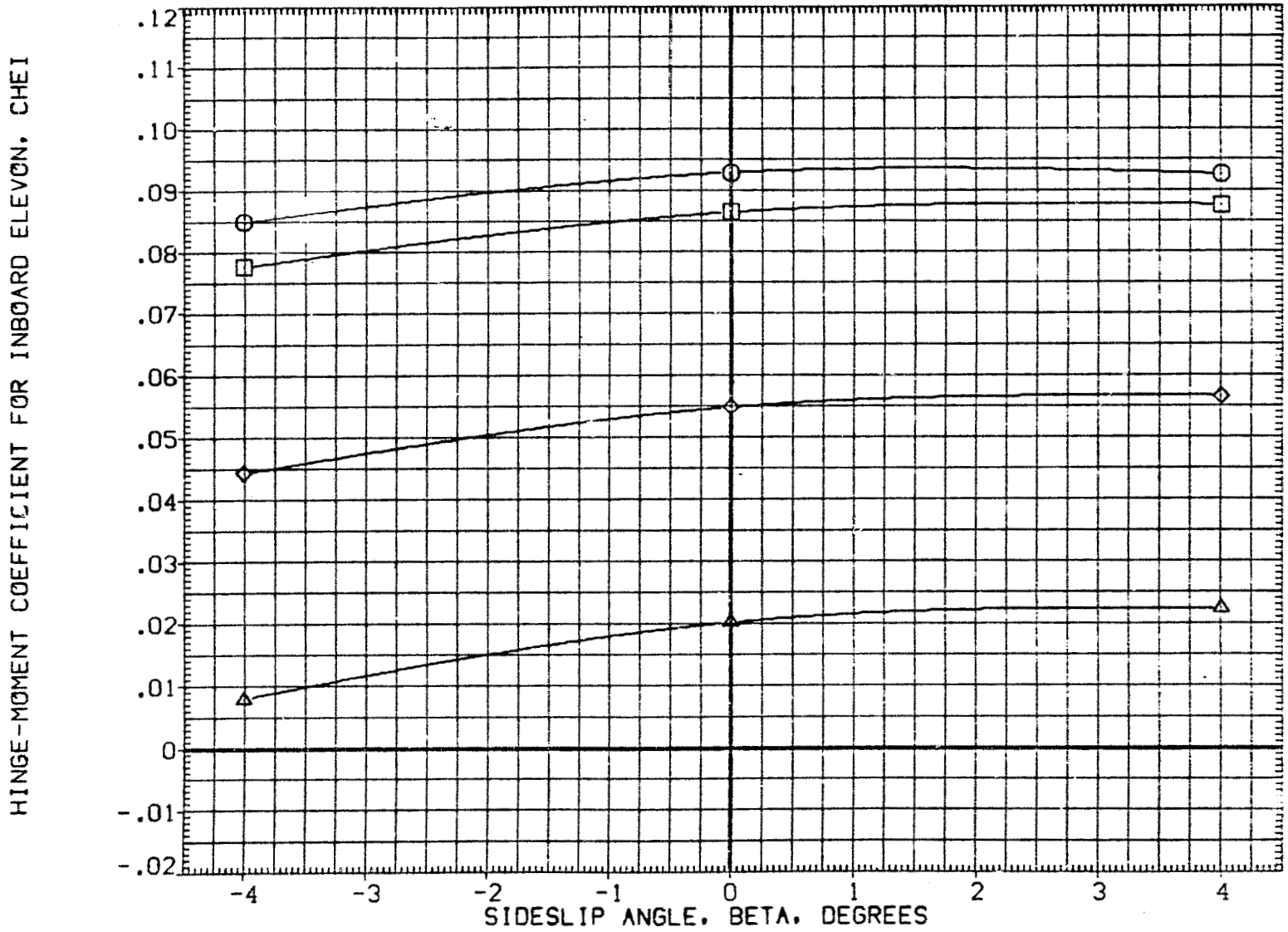



FIG. 43 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.4 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y24) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YA9) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | 1.400 | 4.250 |
| (RE4Y99) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | 1.400 | 4.250 |
| (RE4Y83) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | 1.400 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.0000 | IN. |
| BREF | 1290.0000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

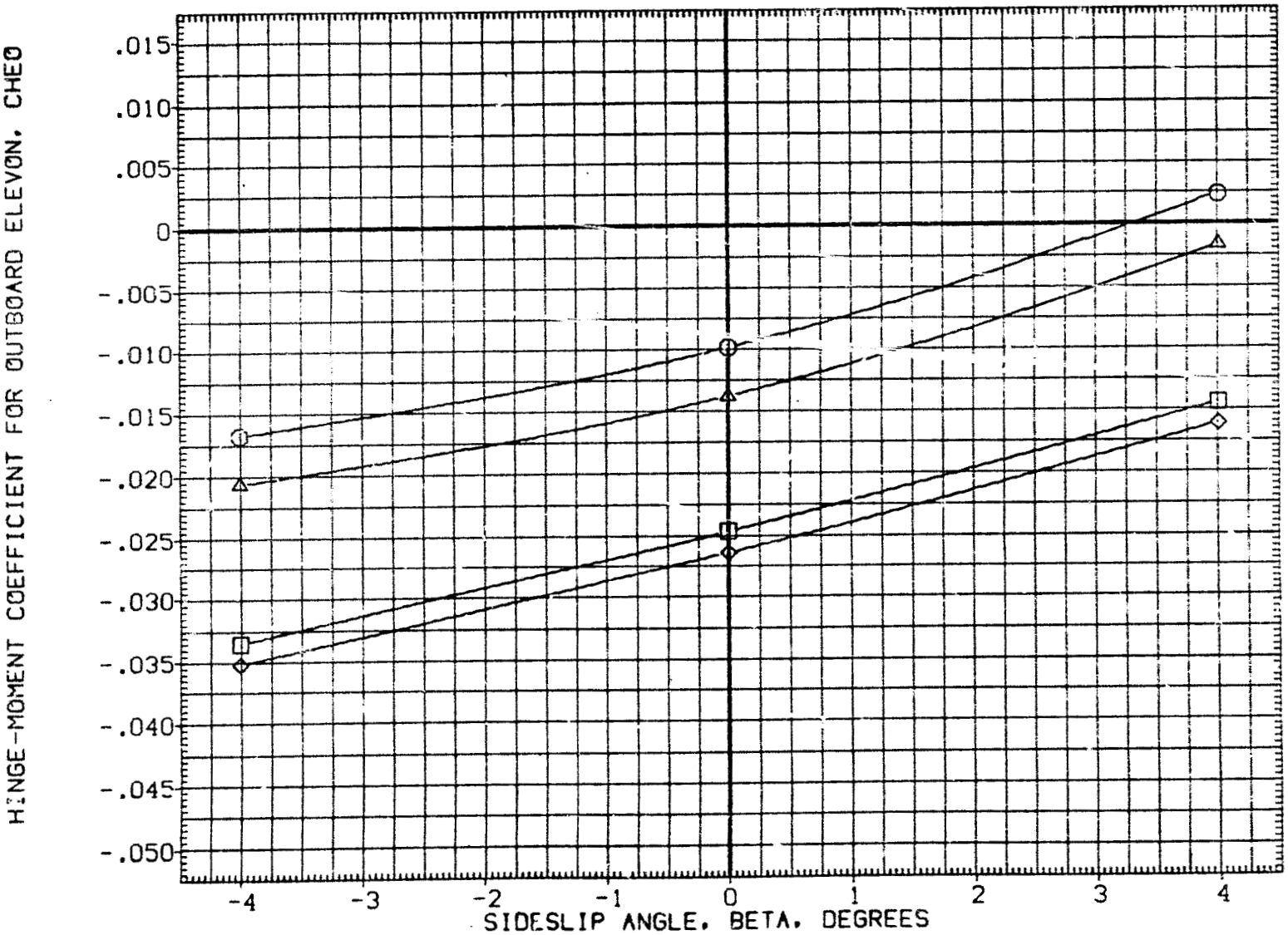



FIG. 43 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.4 PLUME ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y24) | ARC 11-023 IA80 GTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y62) | ARC 11-023 IA80 GTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

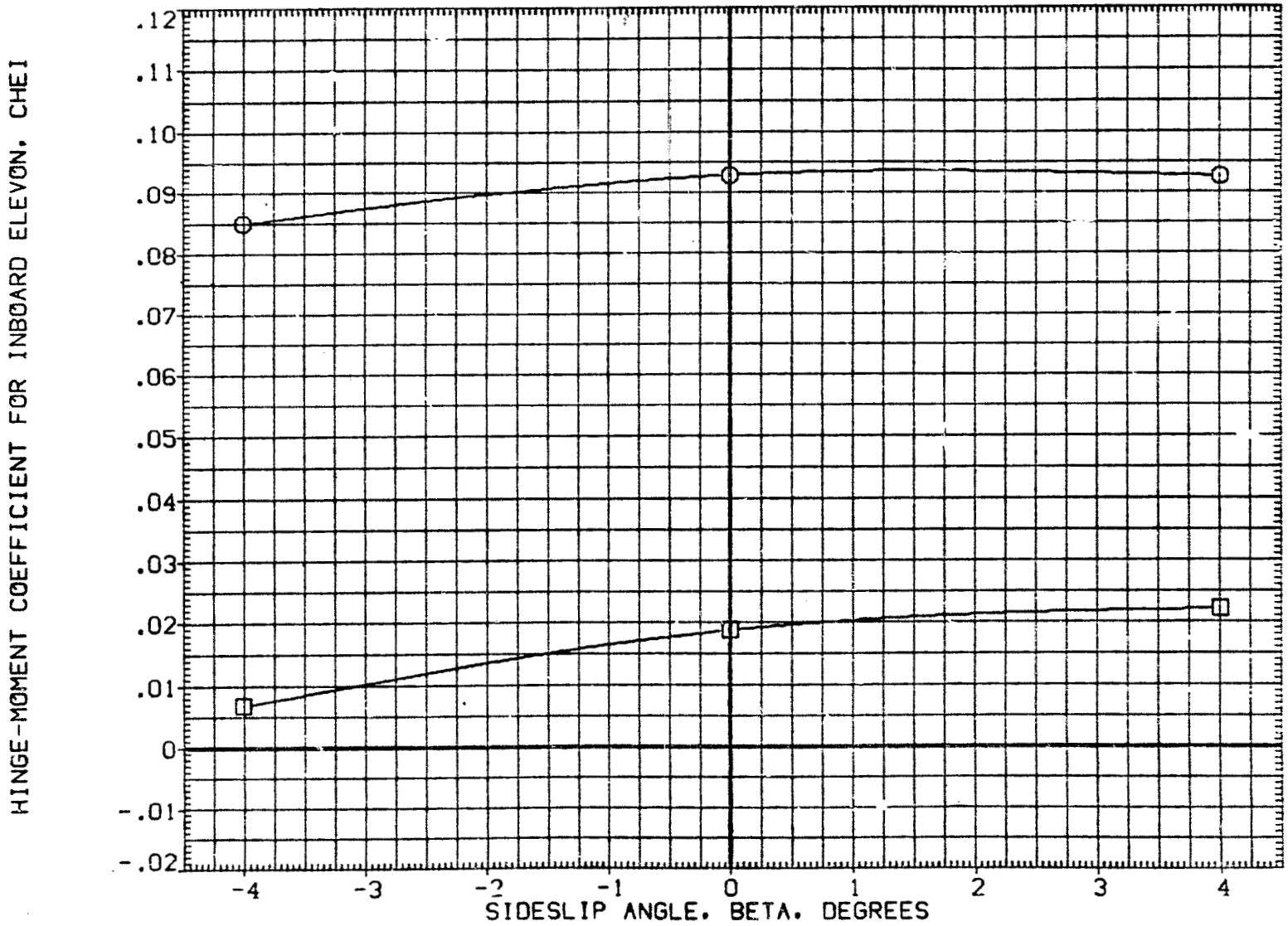



FIG. 43 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.4 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y24) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y62) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

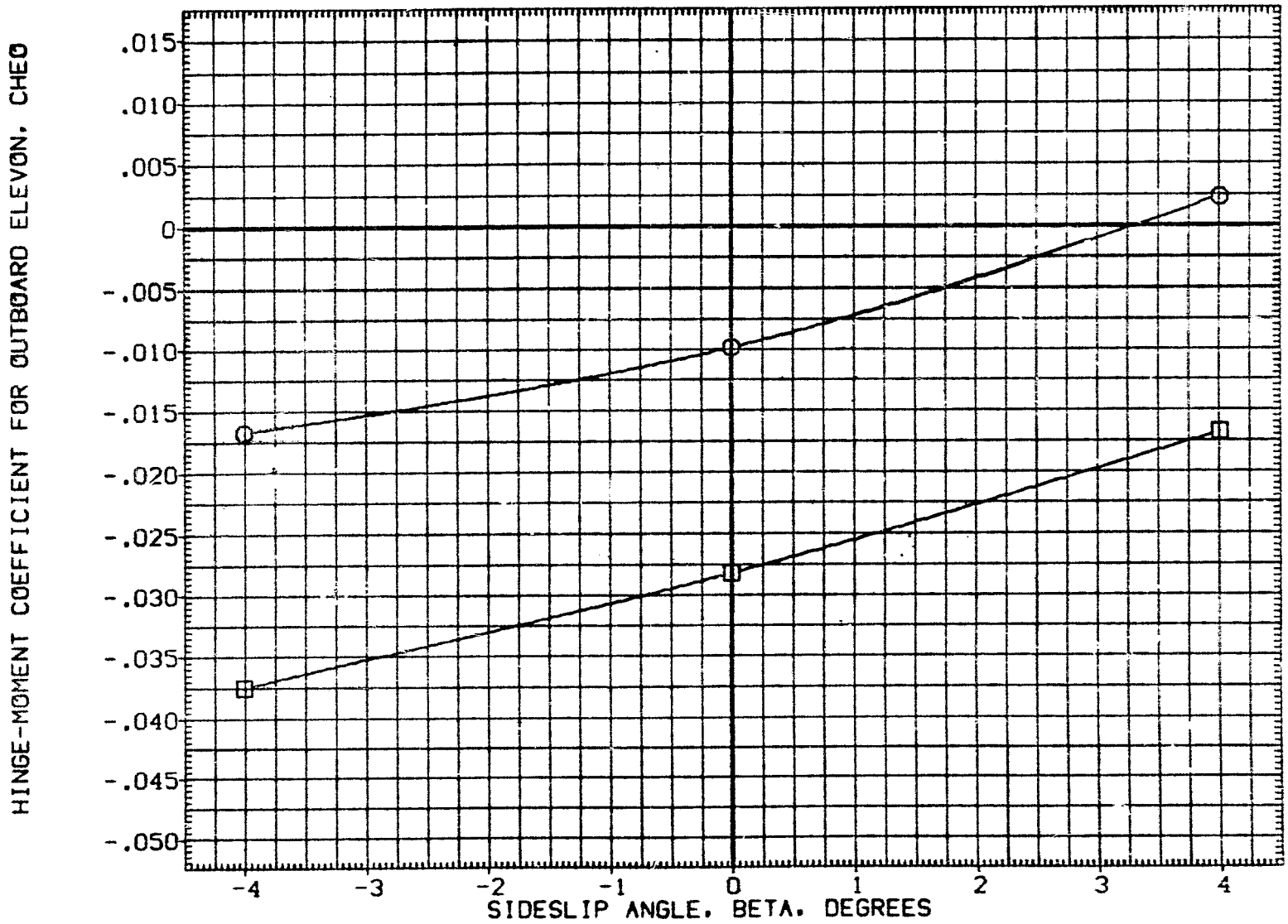



FIG. 43 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.4 PLUME ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (PE4Y85) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

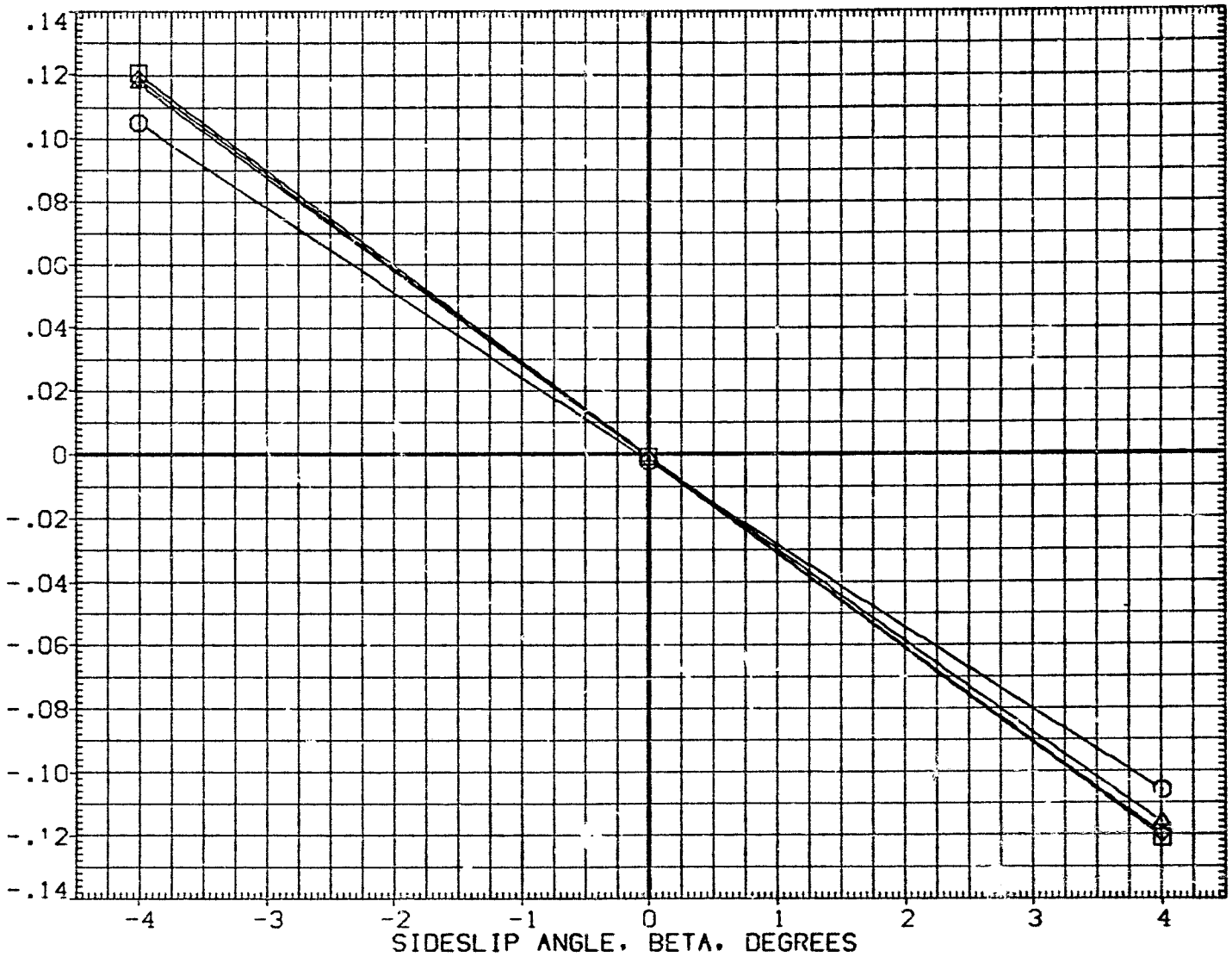



FIG. 44 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4Y85) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

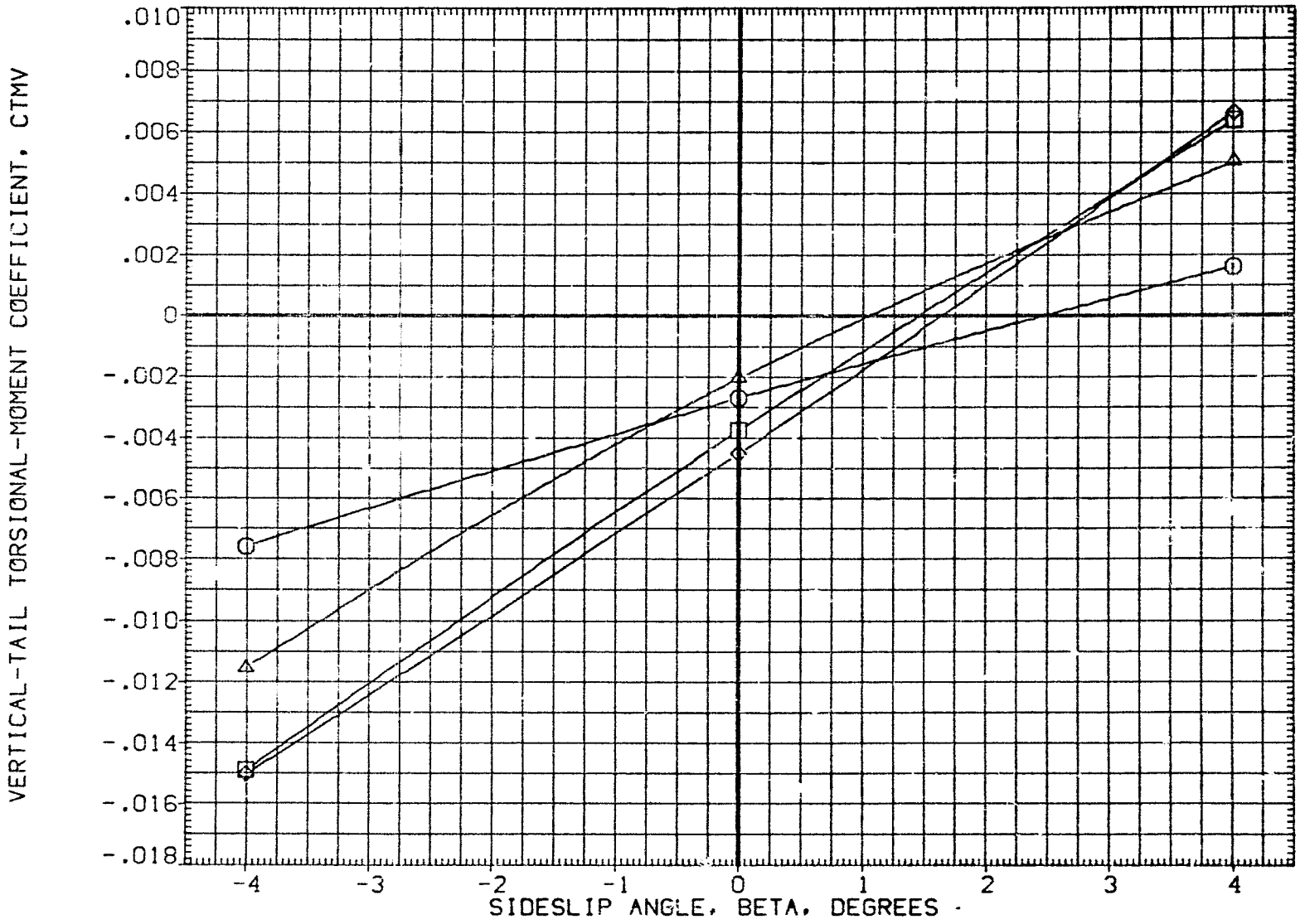



FIG. 44 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (PE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4Y35) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

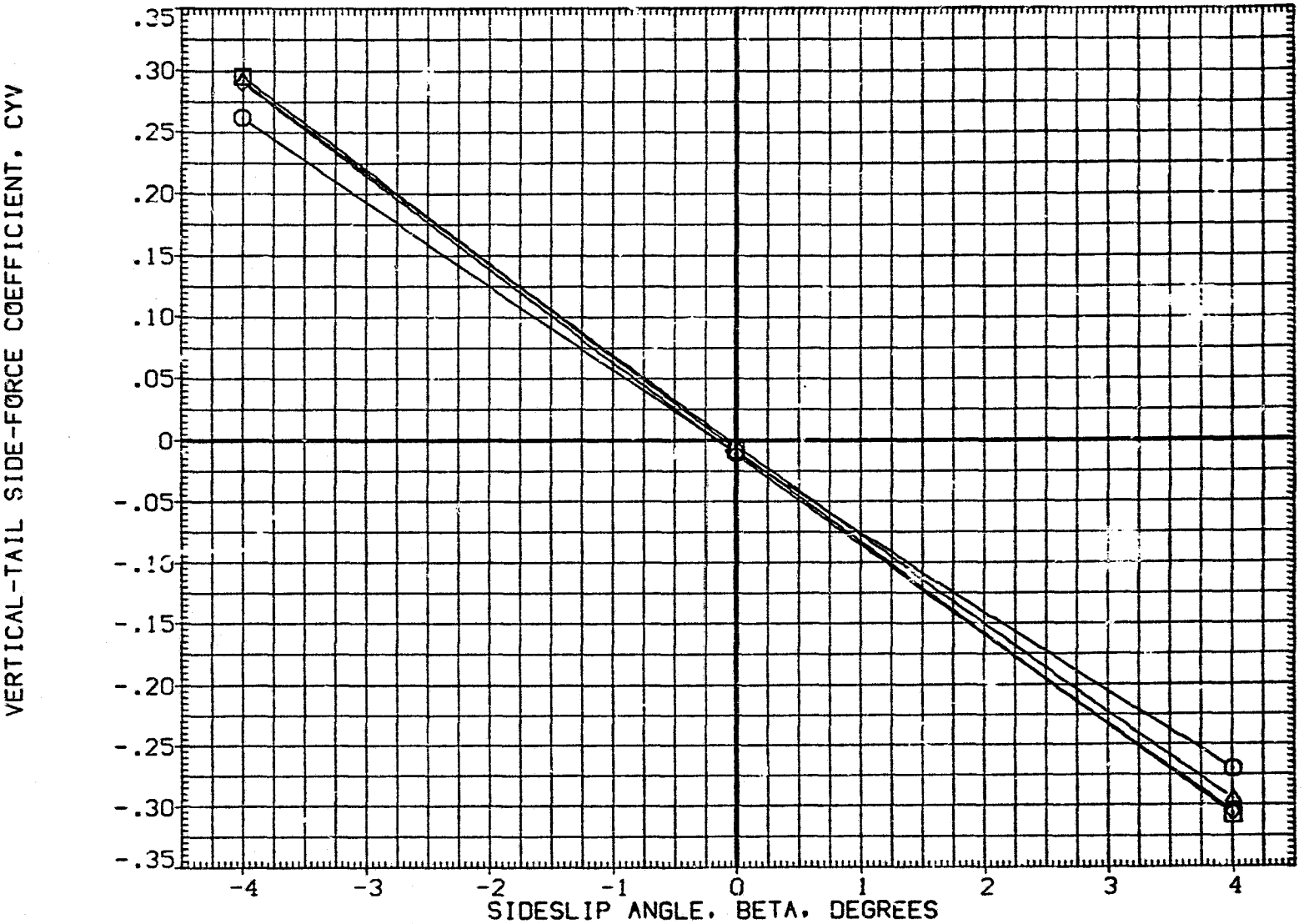



FIG. 44 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4Y12) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4YB6) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

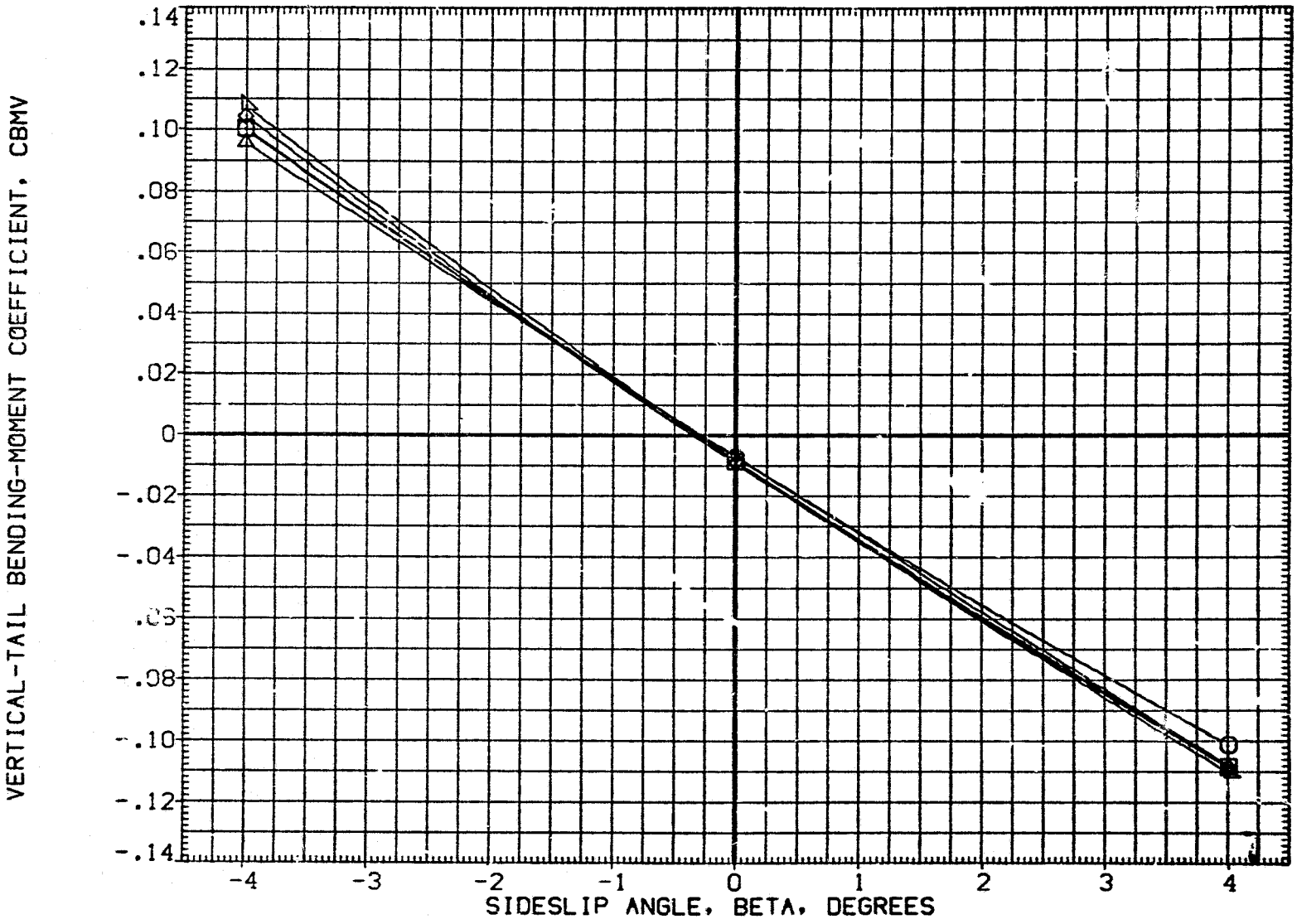



FIG. 45 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4Y12) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4YB6) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

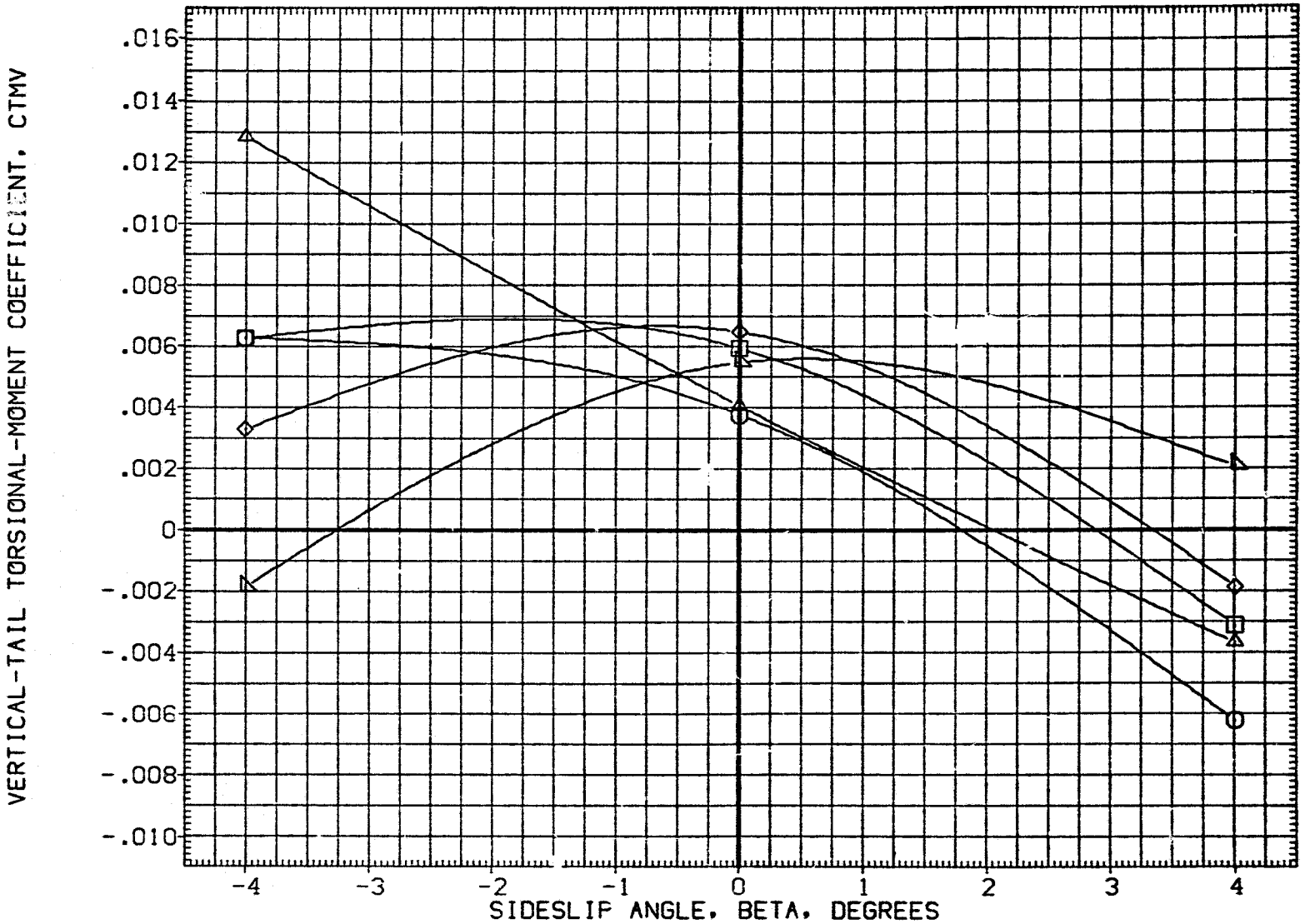



FIG. 45 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4Y12) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4Y86) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

FIG. 45 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y17) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y13) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YB7) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

FIG. 46 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y17) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y13) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YB7) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

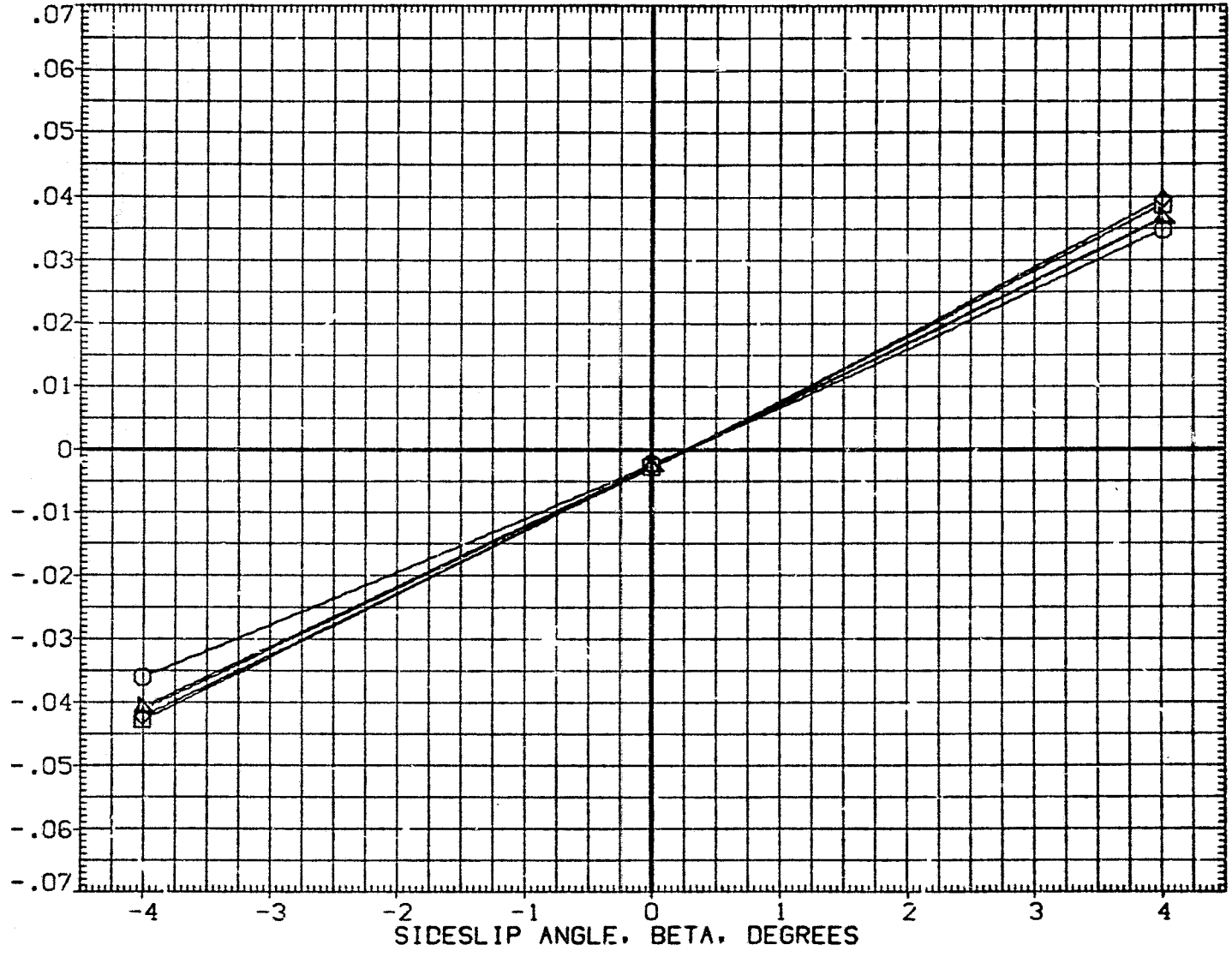



FIG. 46 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y17) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y13) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YB7) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

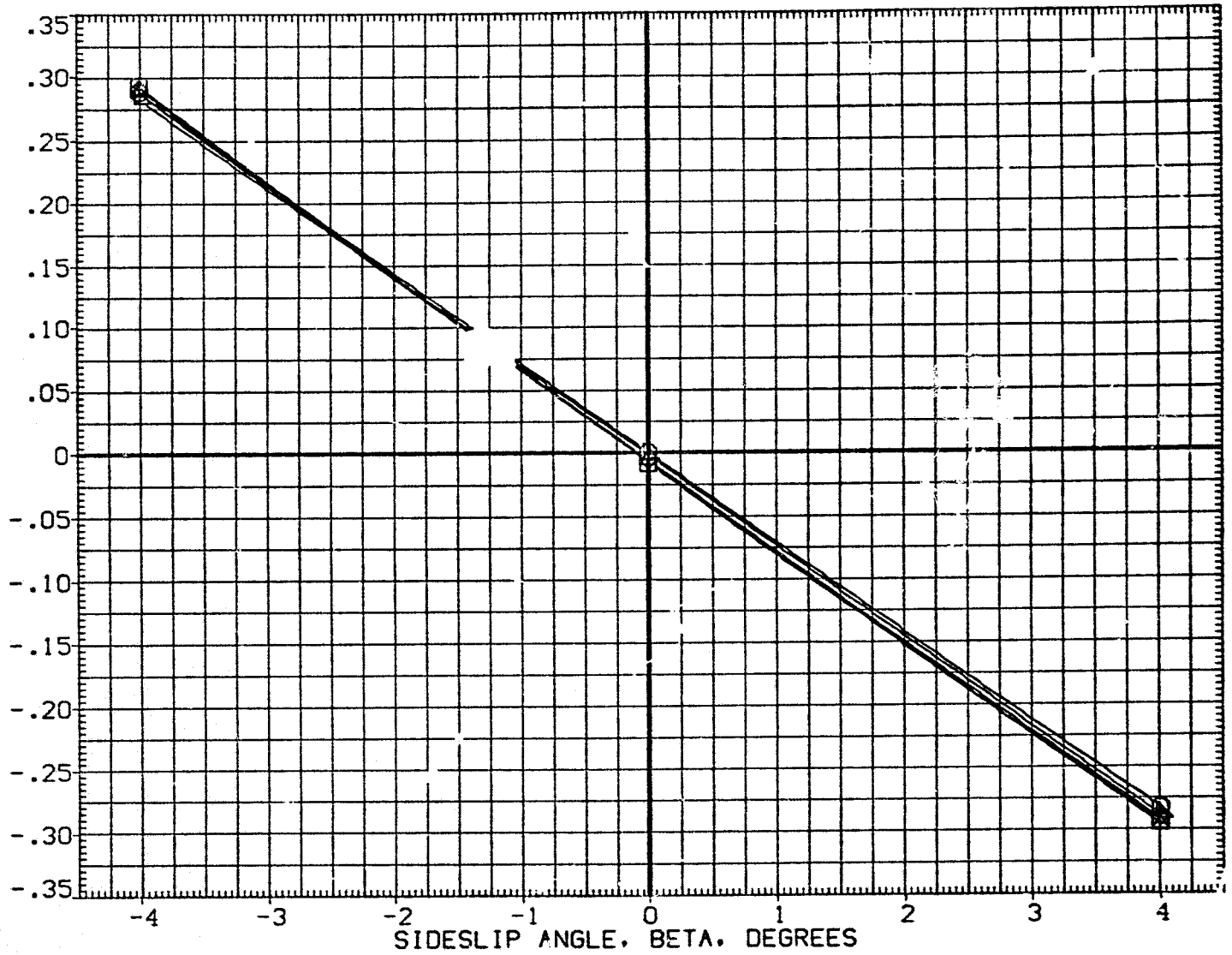



FIG. 46 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y18) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y14) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YB8) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

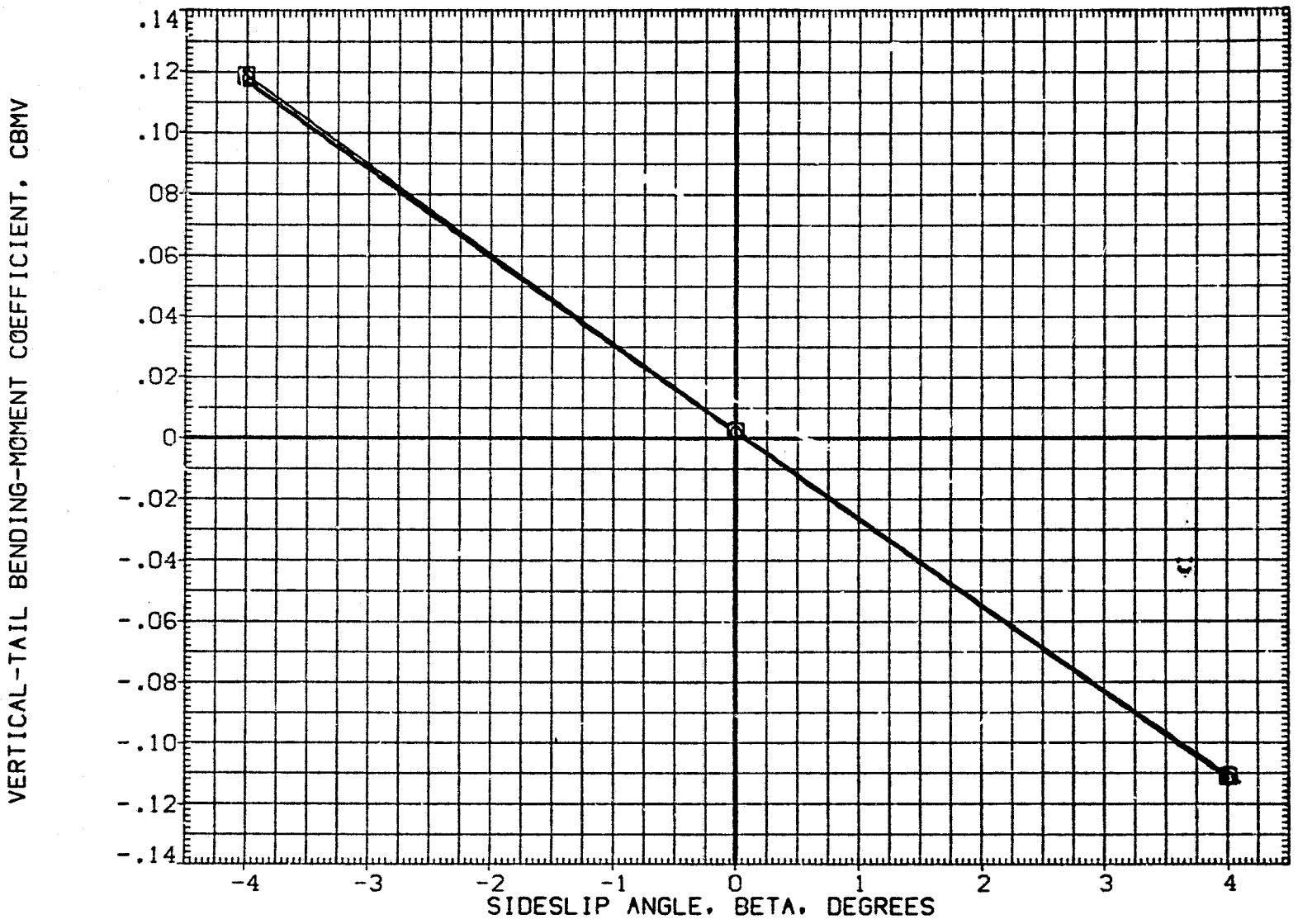



FIG. 47 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y18) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y14) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YB8) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

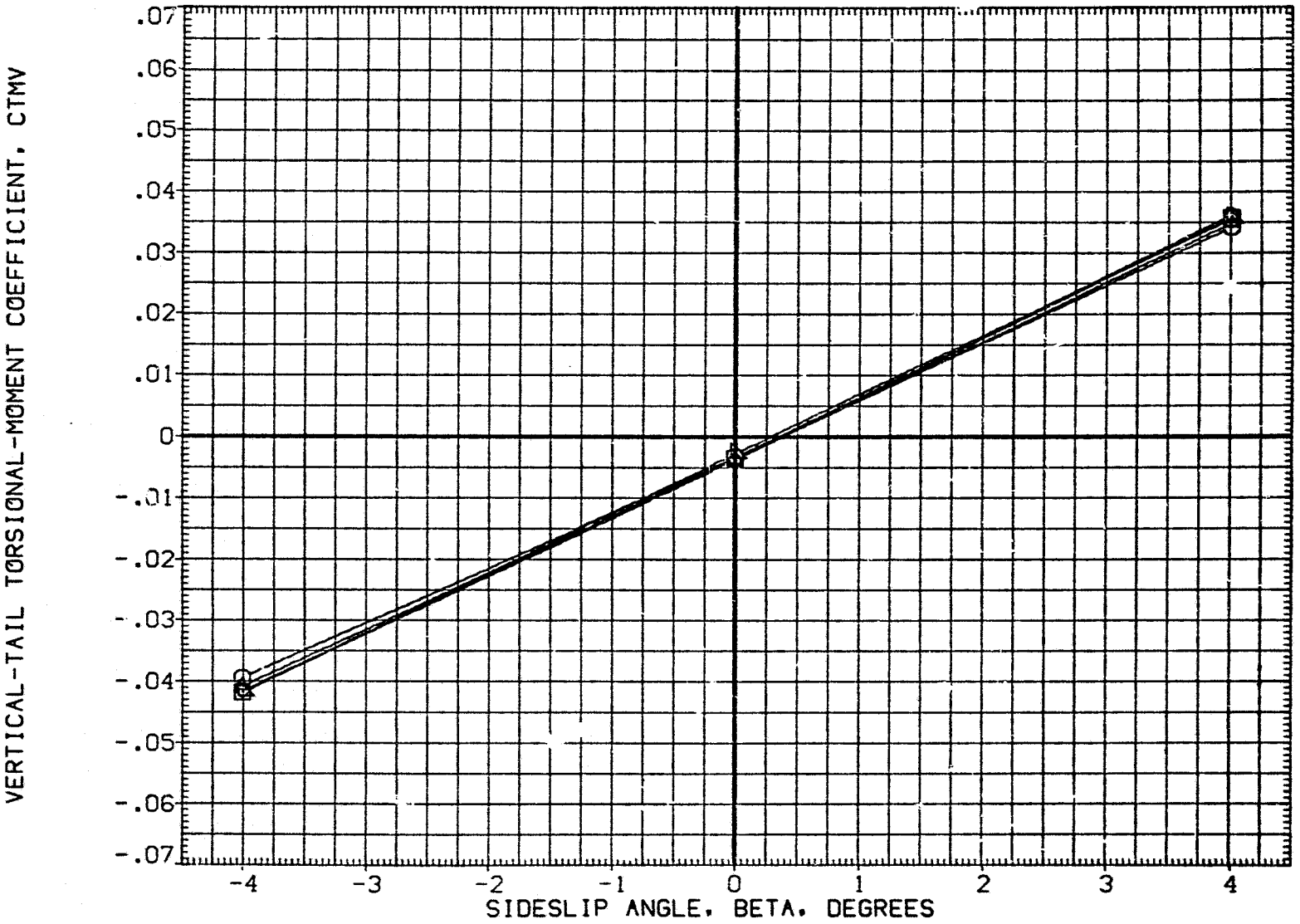



FIG. 47 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y18) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y14) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y88) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

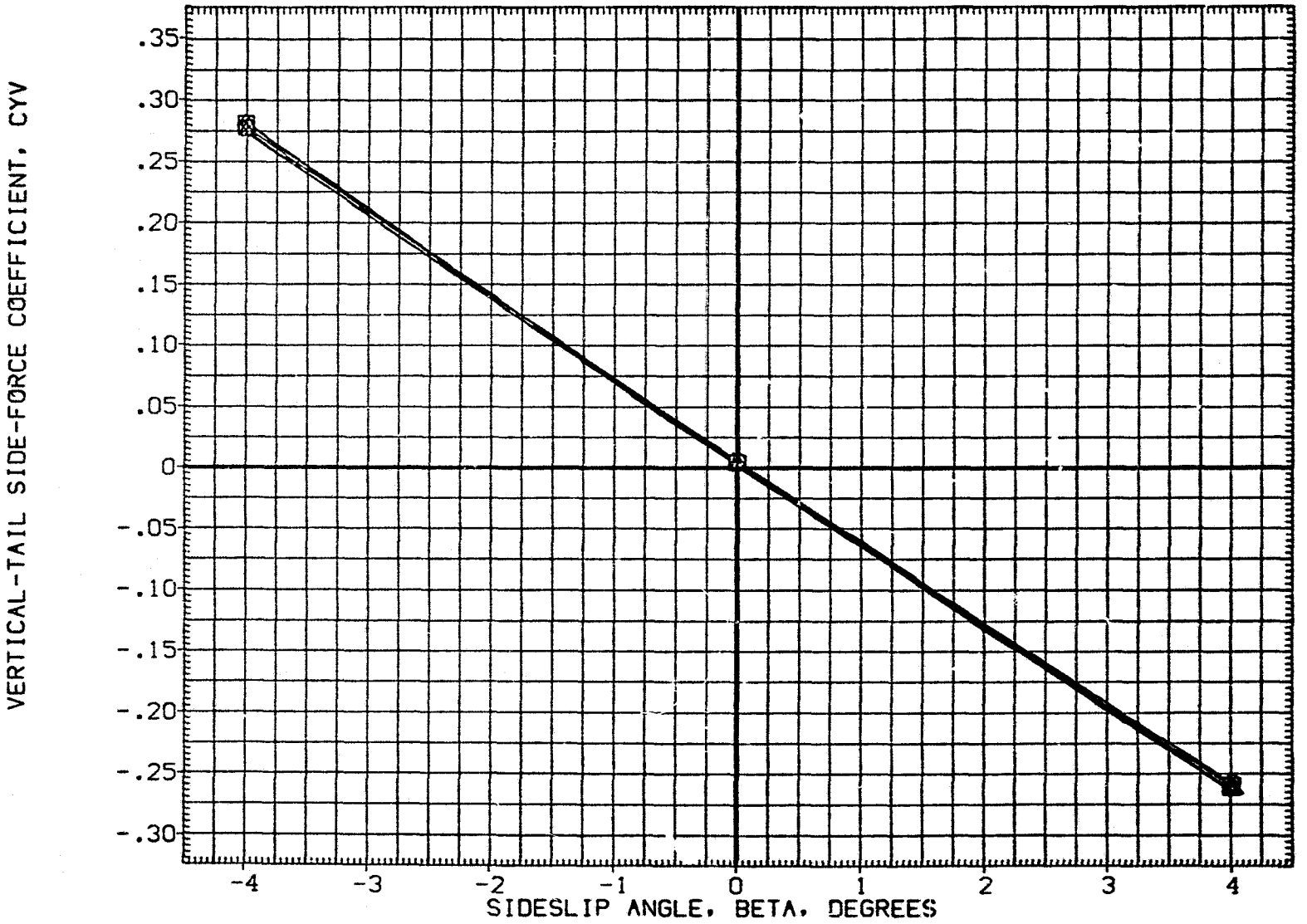



FIG. 47 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | R:/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y19) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y15) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YB9) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

RE.'ERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

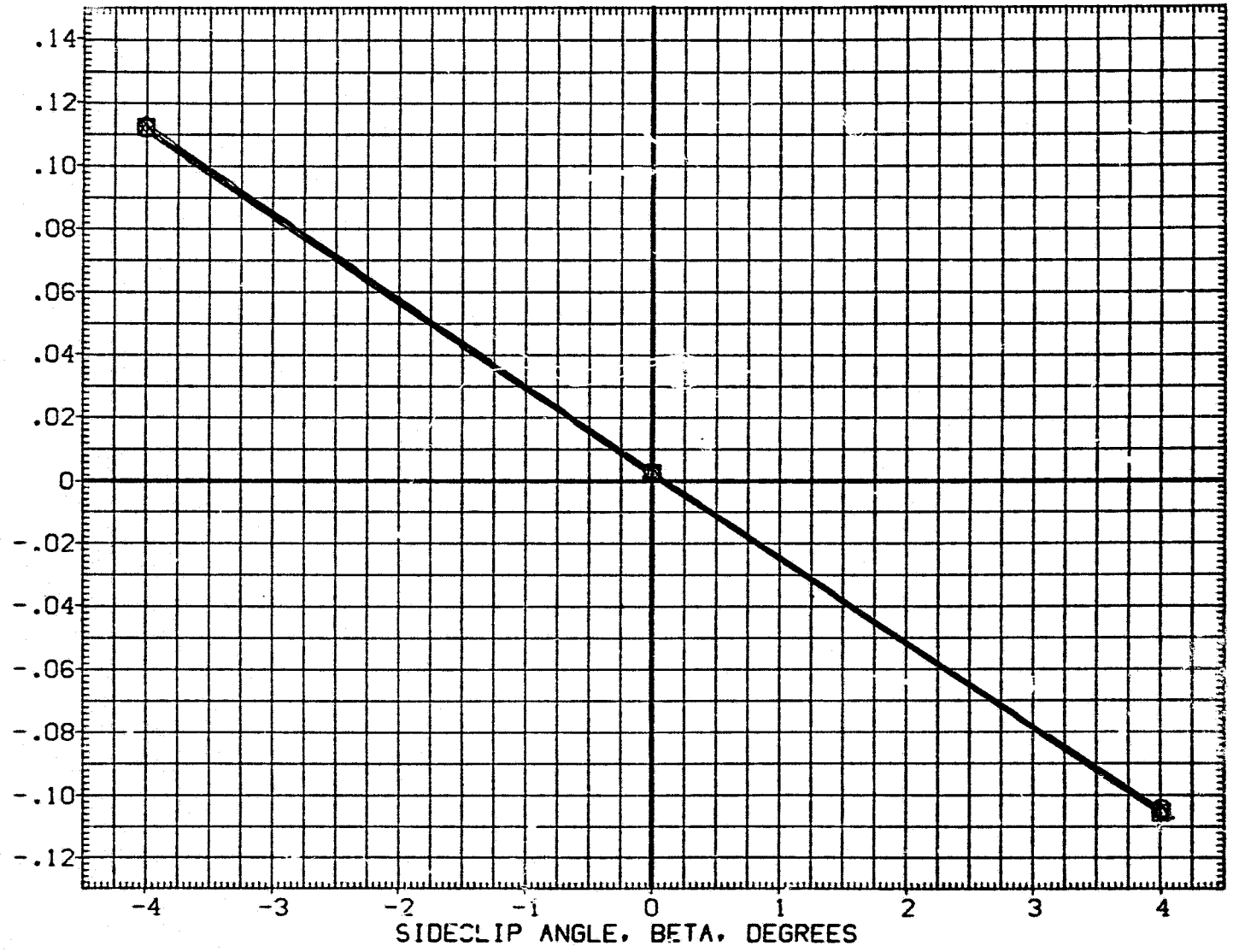



FIG. 48 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y19) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y15) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YB9) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

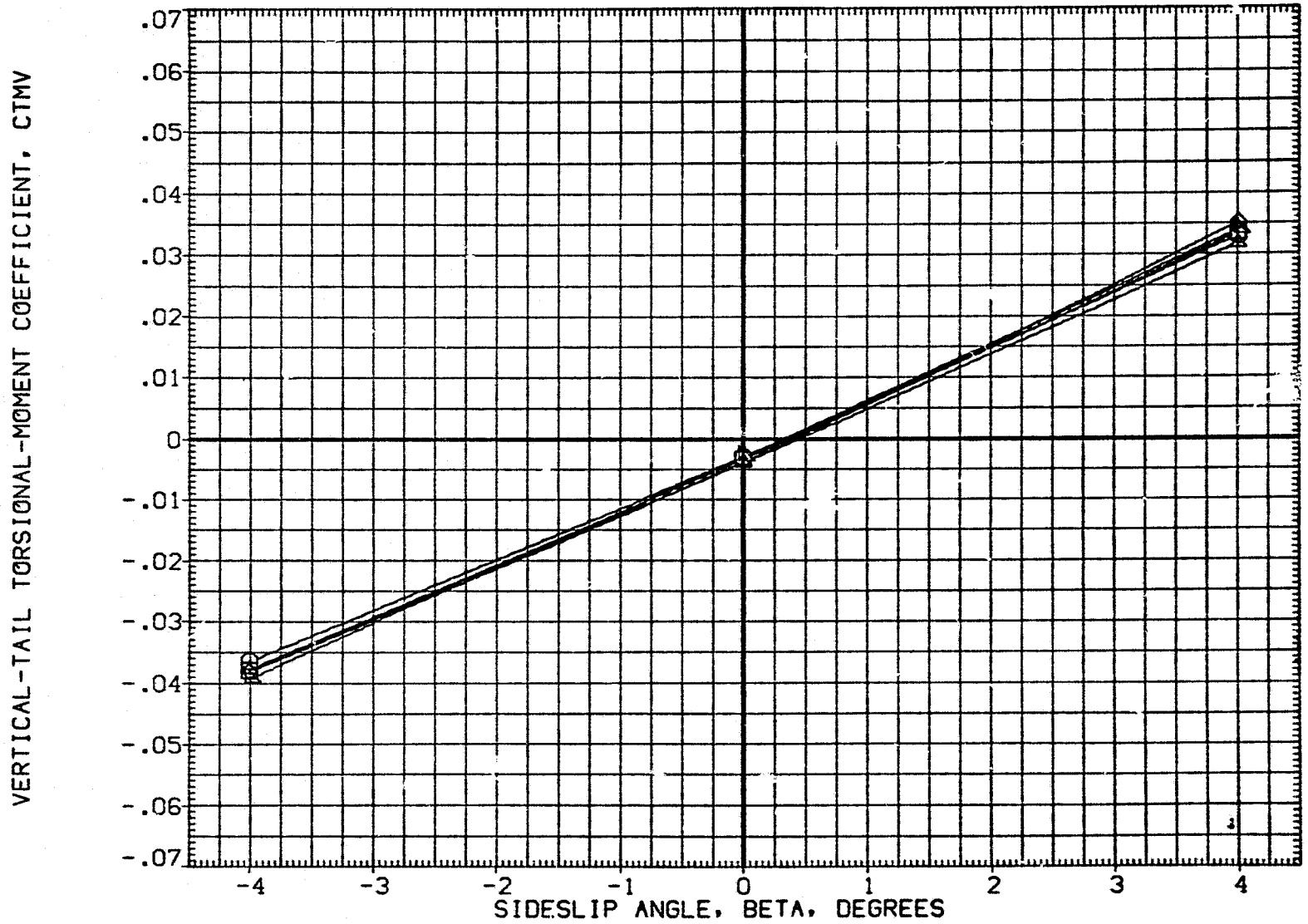



FIG. 48 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y19) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y15) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YB9) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

FIG. 48 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4YB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

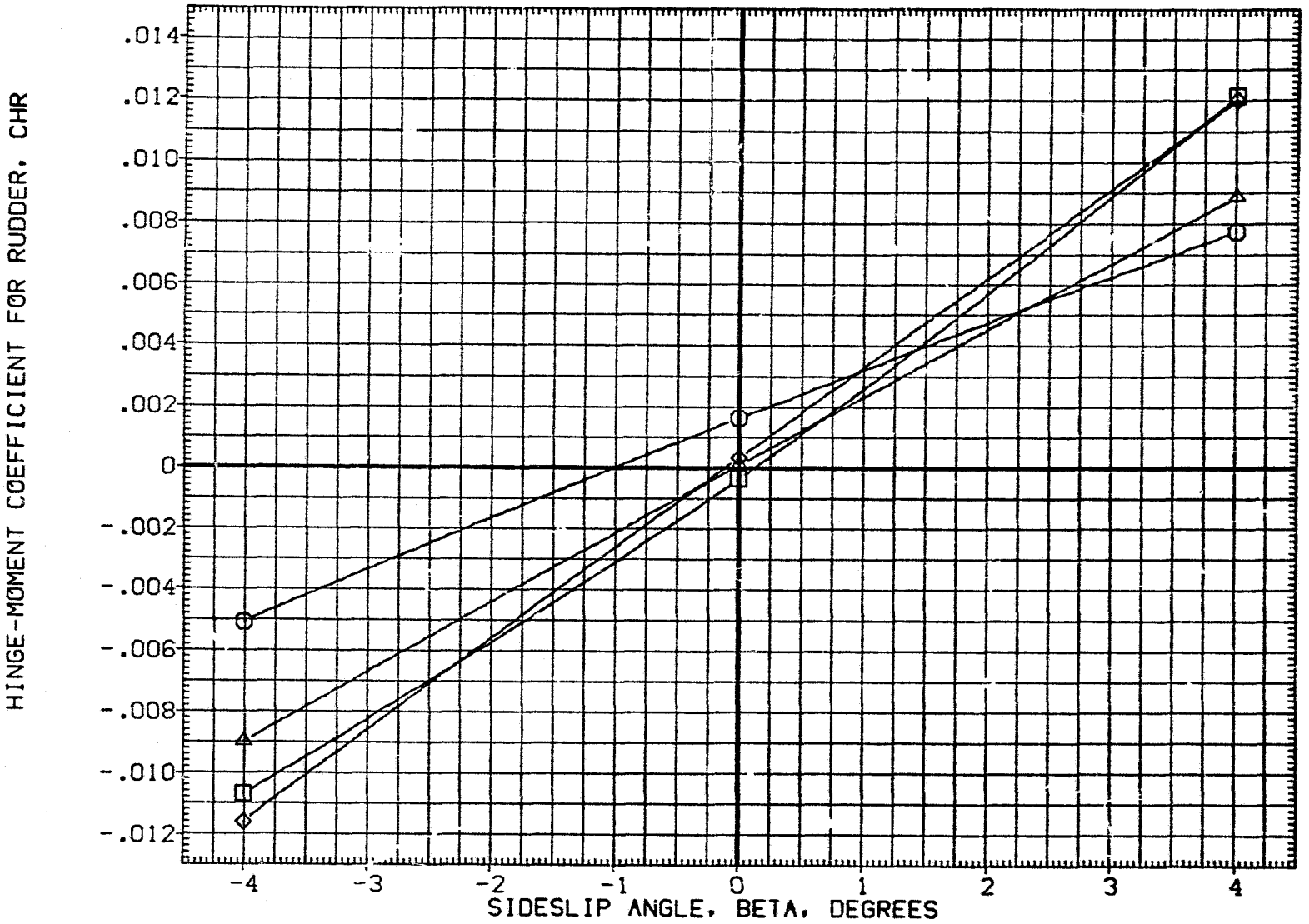



FIG. 49 PLUME EFFECTS ON RUDDER HINGE MOMENT, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4Y12) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4YB6) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

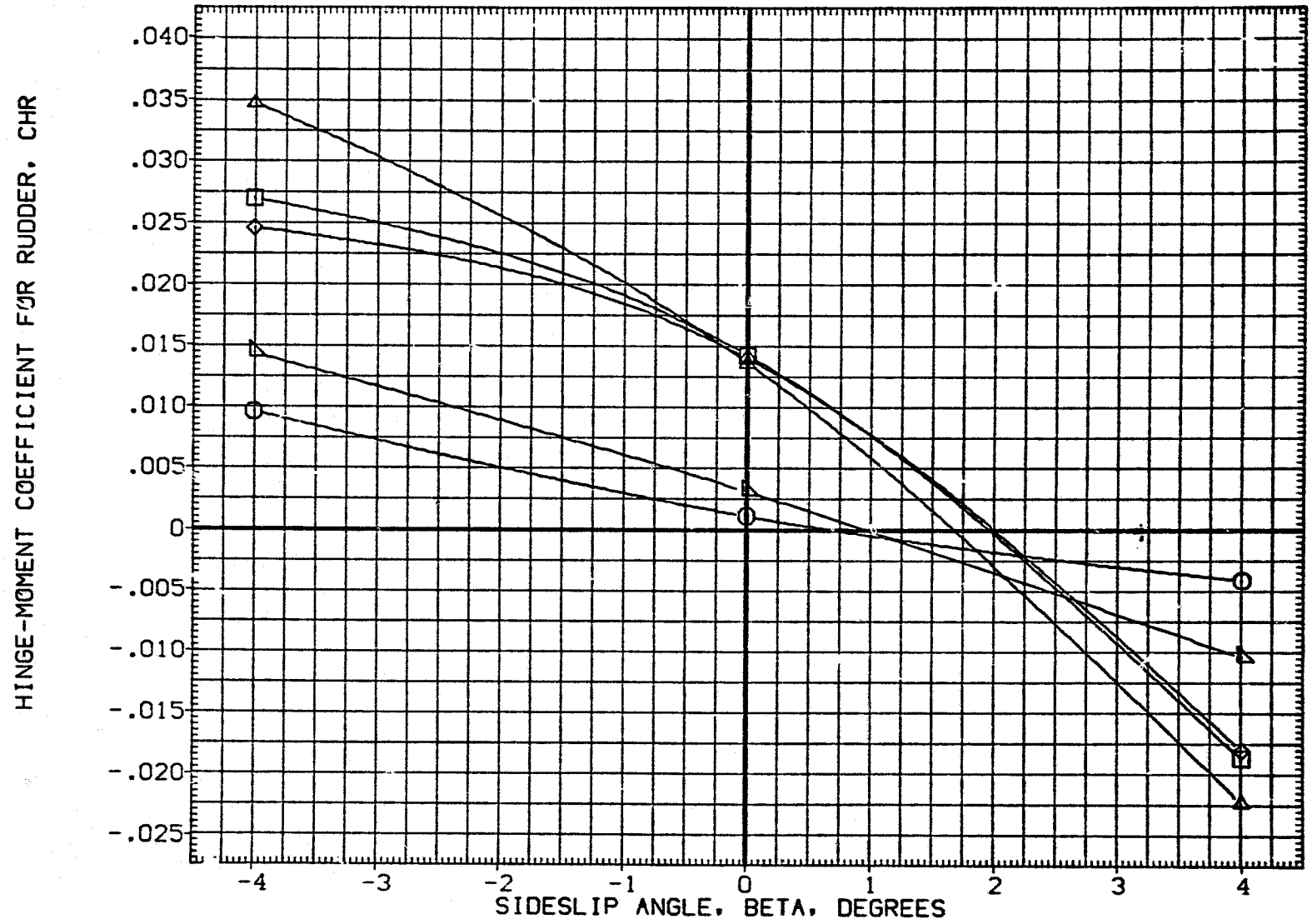



FIG. 50 PLUME EFFECTS ON RUDDER HINGE MOMENT, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y17) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y13) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YB7) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

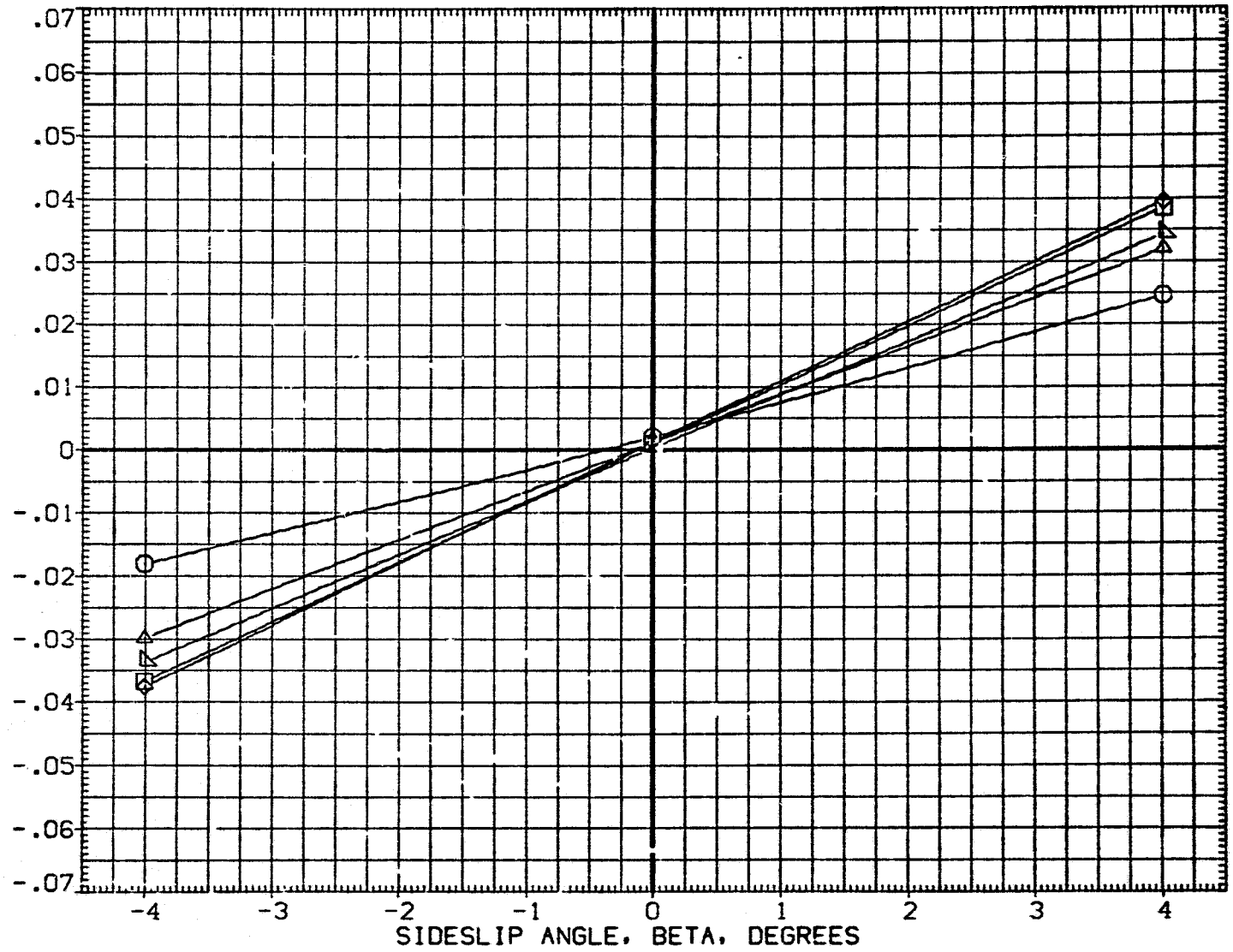



FIG. 51 PLUME EFFECTS ON RUDDER HINGE MOMENT, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y18) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y14) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y88) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

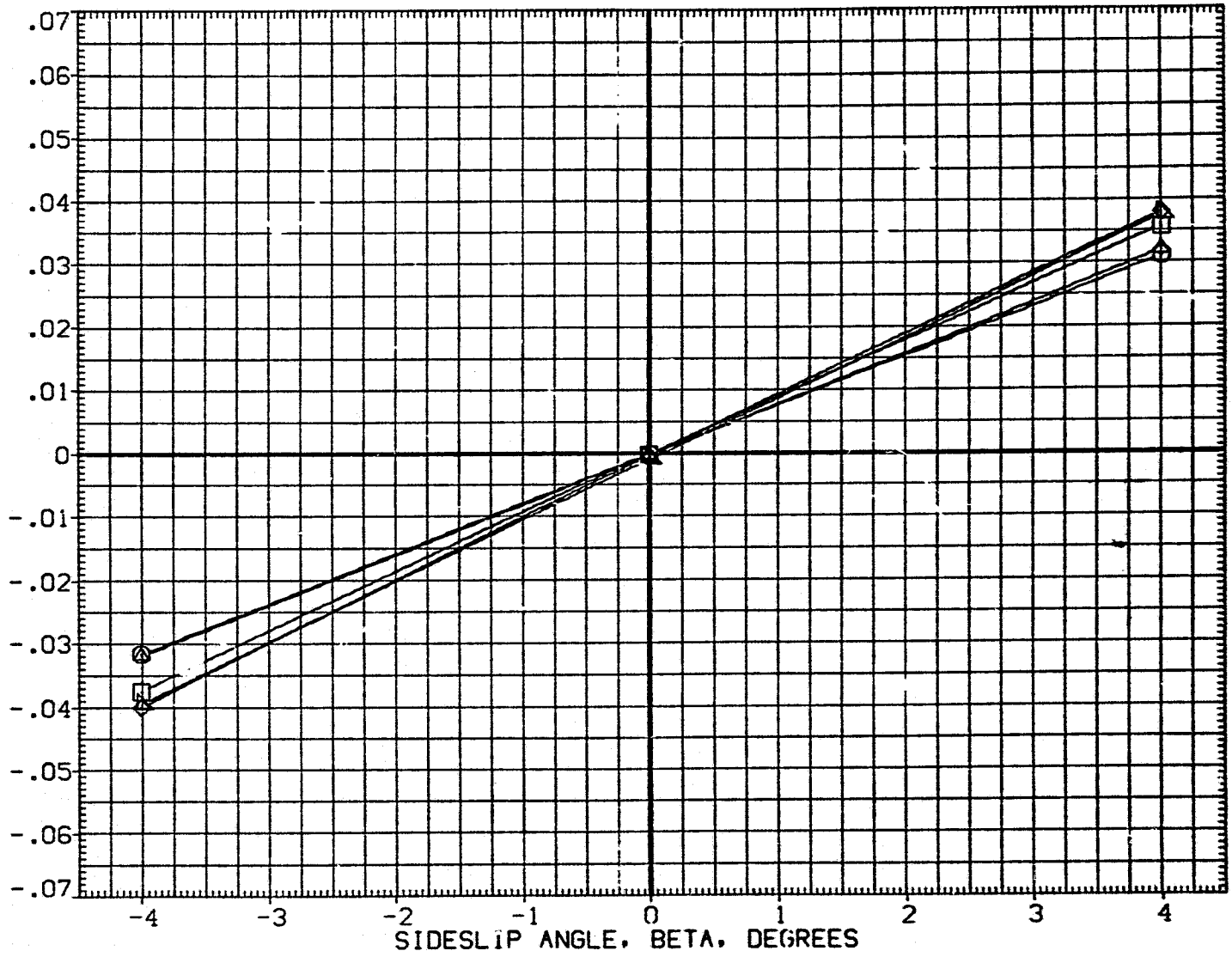



FIG. 52 PLUME EFFECTS ON RUDDER HINGE MOMENT, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y19) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y15) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YB9) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

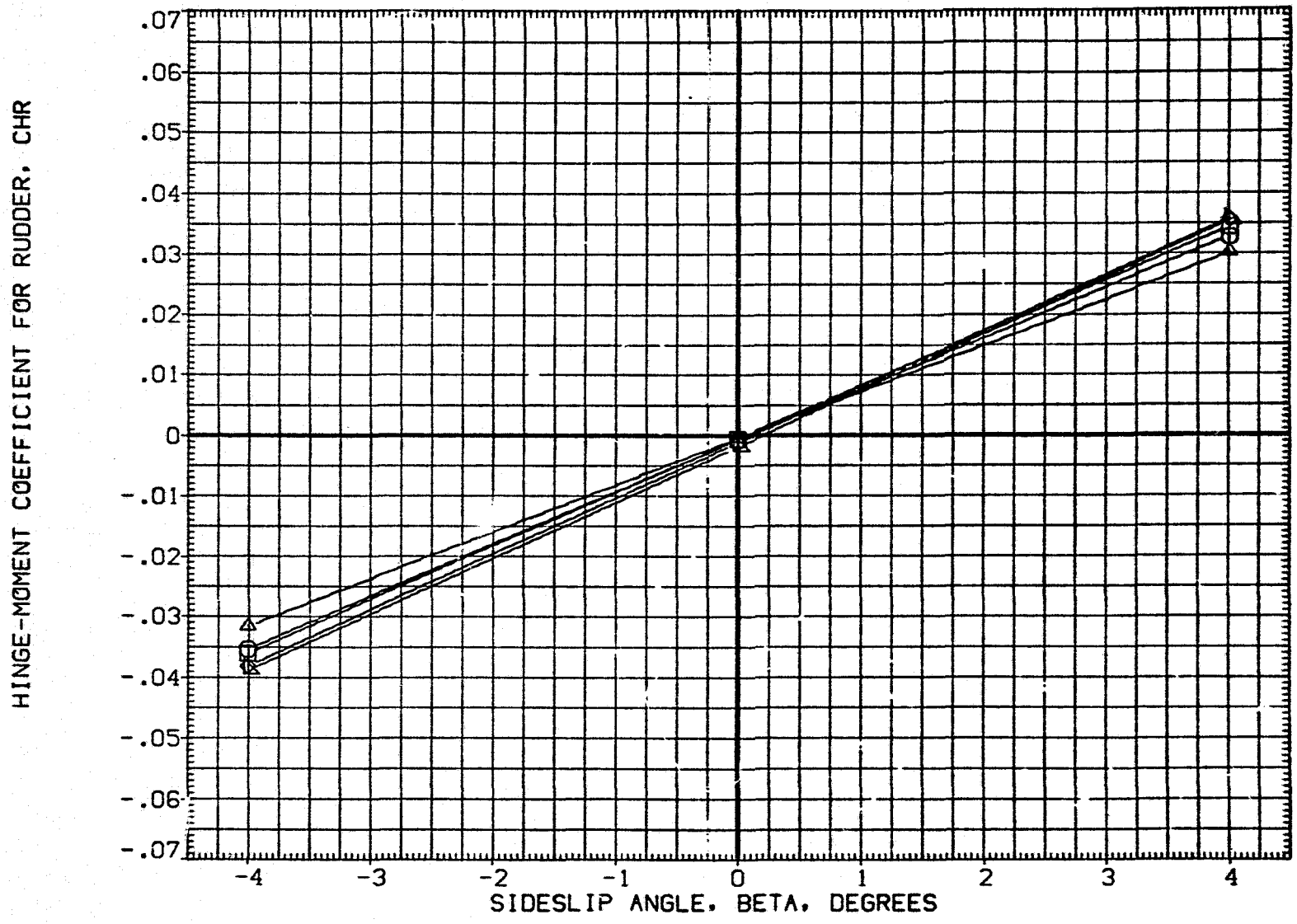



FIG. 53 PLUME EFFECTS ON RUDDER HINGE MOMENT, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X06) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X01) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

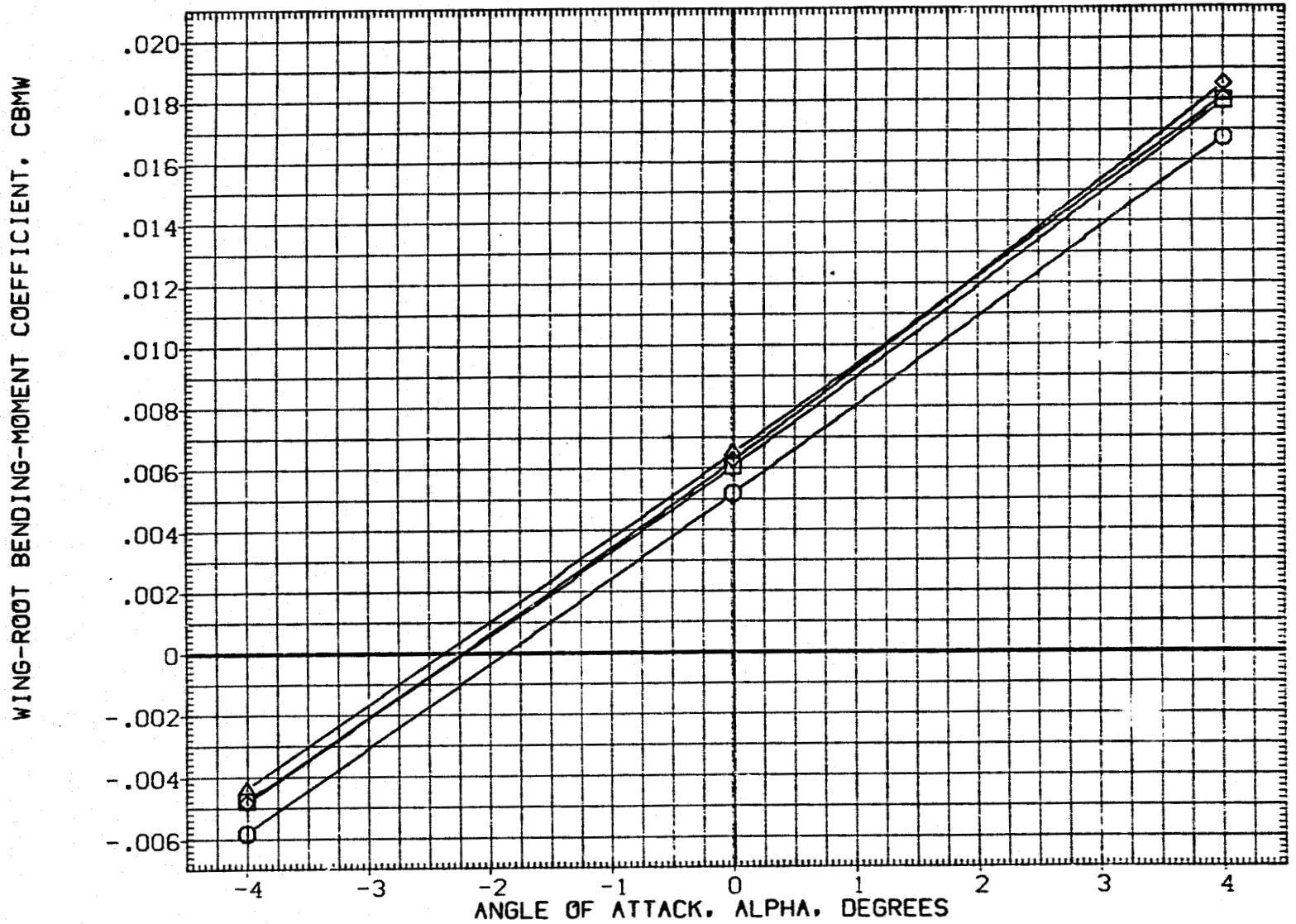



FIG. 54 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.6

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X06) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X01) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

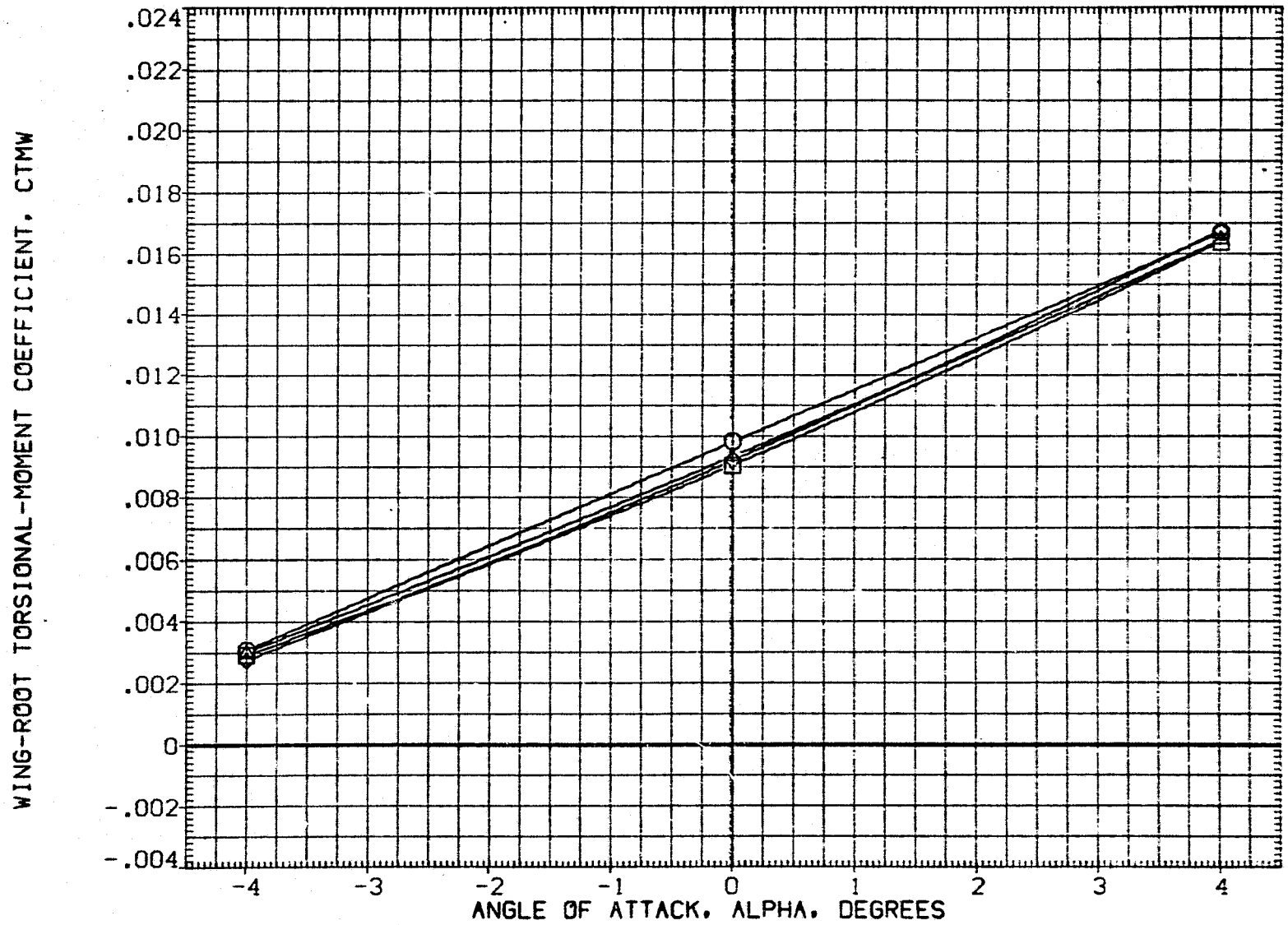



FIG. 54 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.6

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X28) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X20) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X06) ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X01) △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

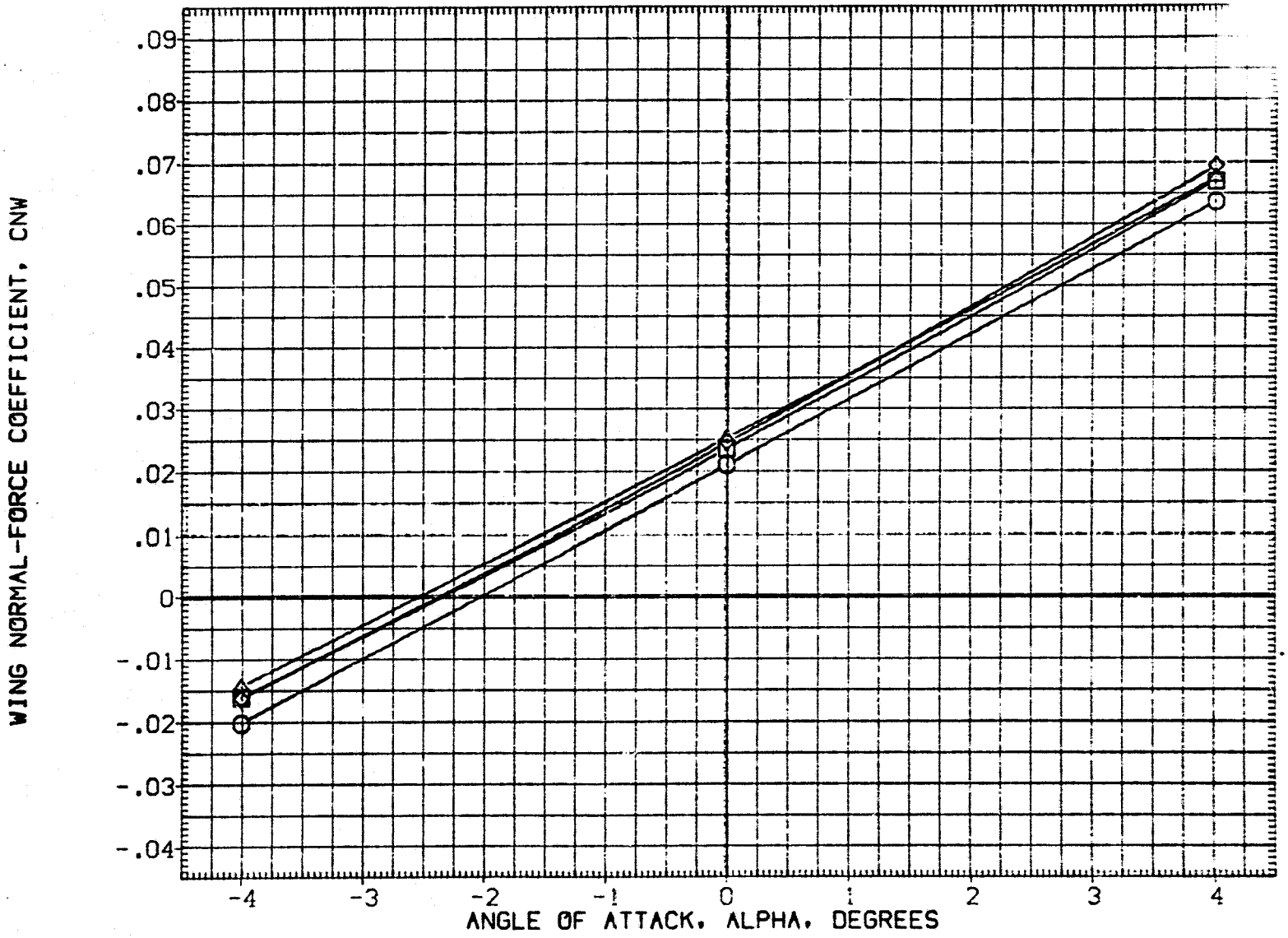



FIG. 54 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.6

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X29) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X21) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X07) | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X02) | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

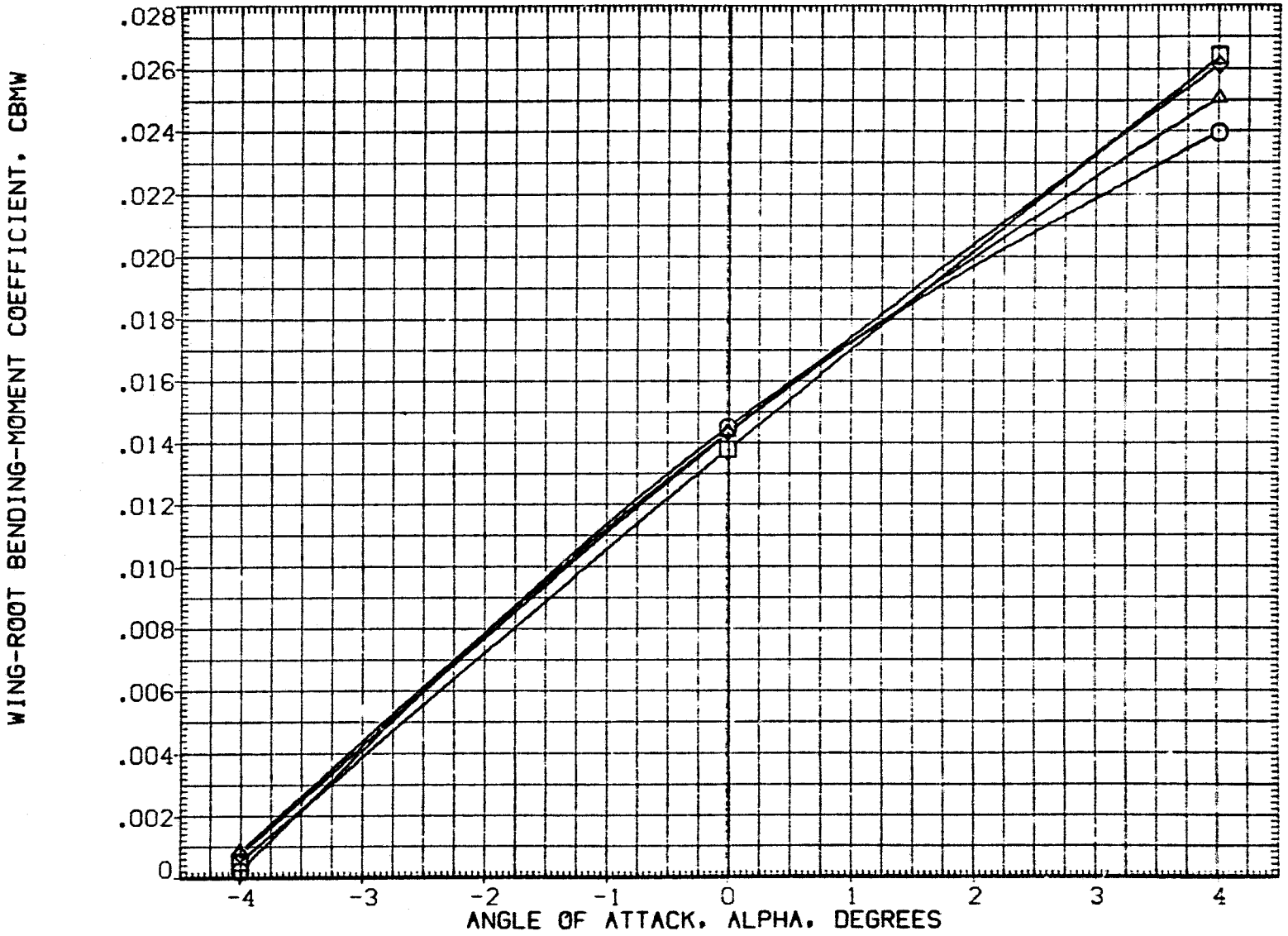



FIG. 55 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.9

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X07) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X02) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

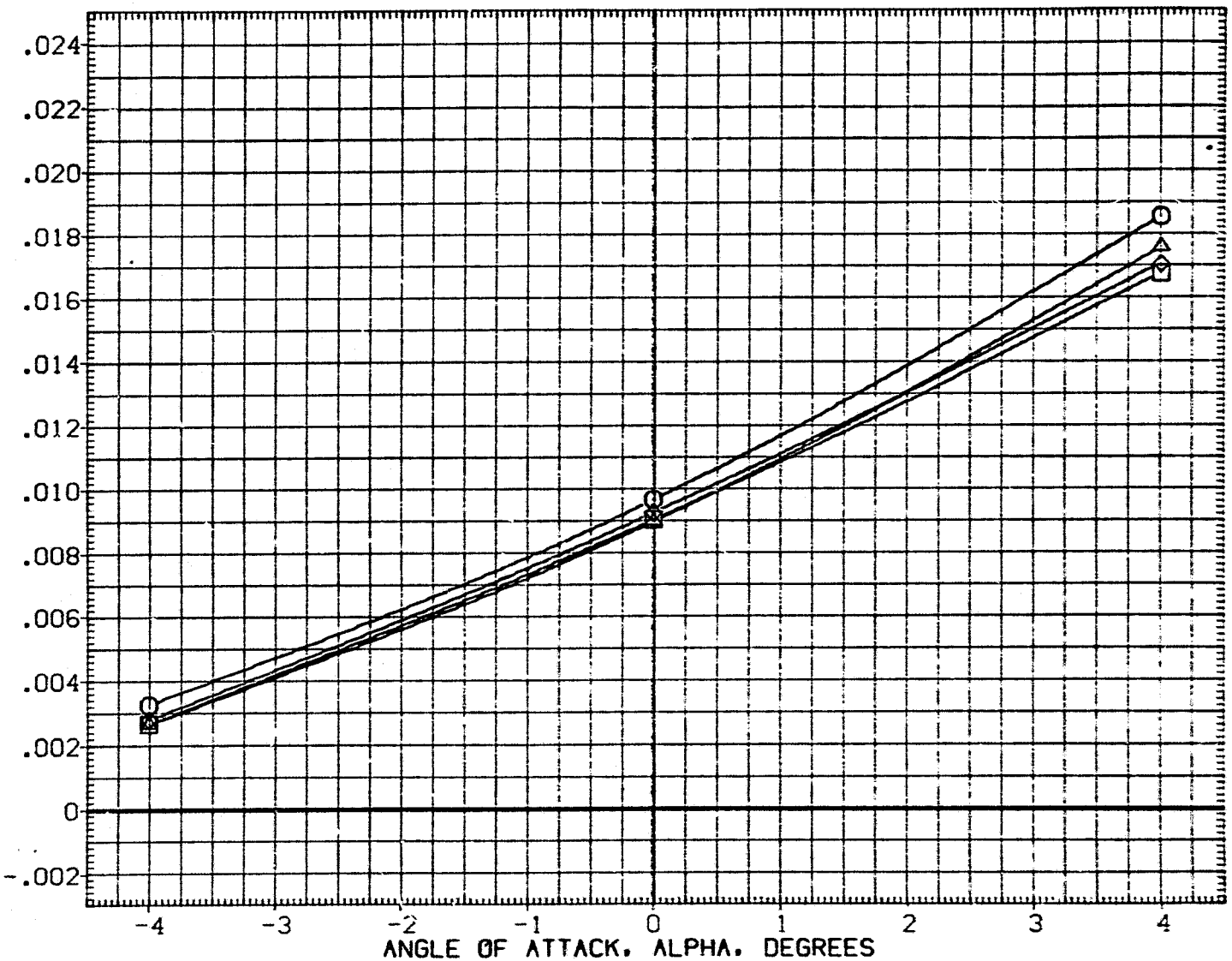



FIG. 55 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.9

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X07) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X02) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

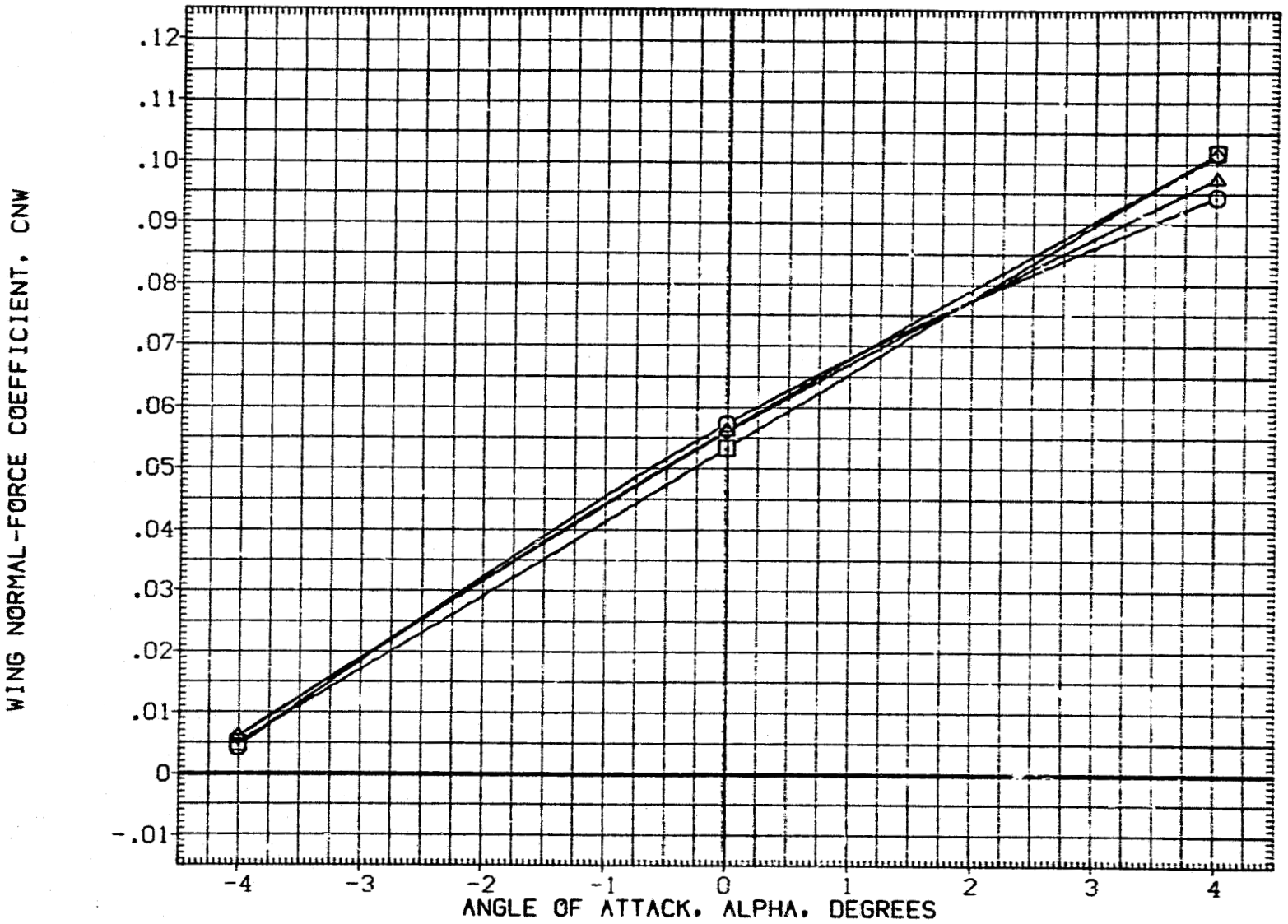



FIG. 55 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.9

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 0TS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X22) | □ | ARC 11-023 IA80 0TS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X25) | ◇ | ARC 11-023 IA80 0TS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X08) | ⋈ | ARC 11-023 IA80 0TS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X03) | △ | ARC 11-023 IA80 0TS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

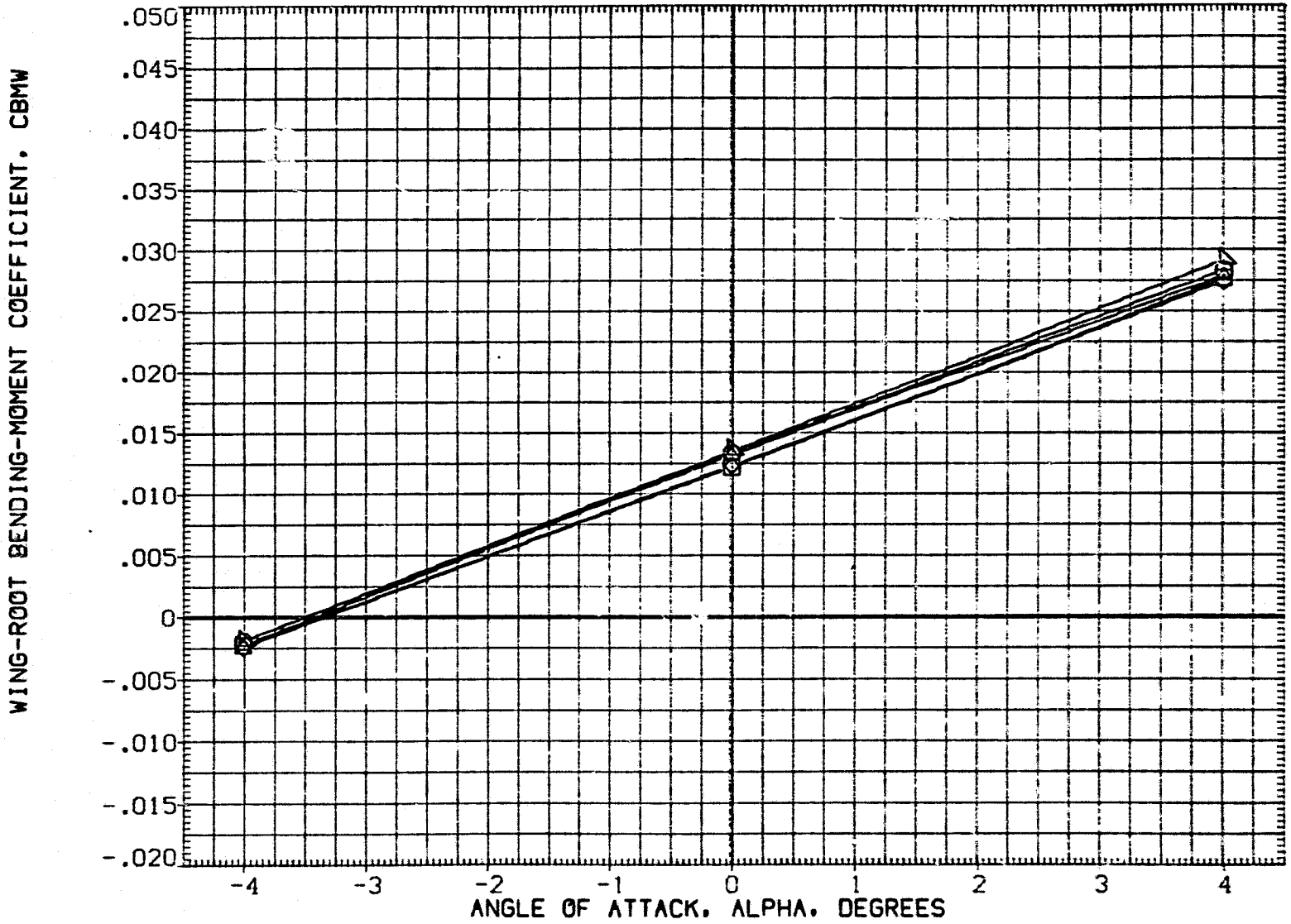



FIG. 56 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.1

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X30) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X22) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X25) | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X08) | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X03) | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

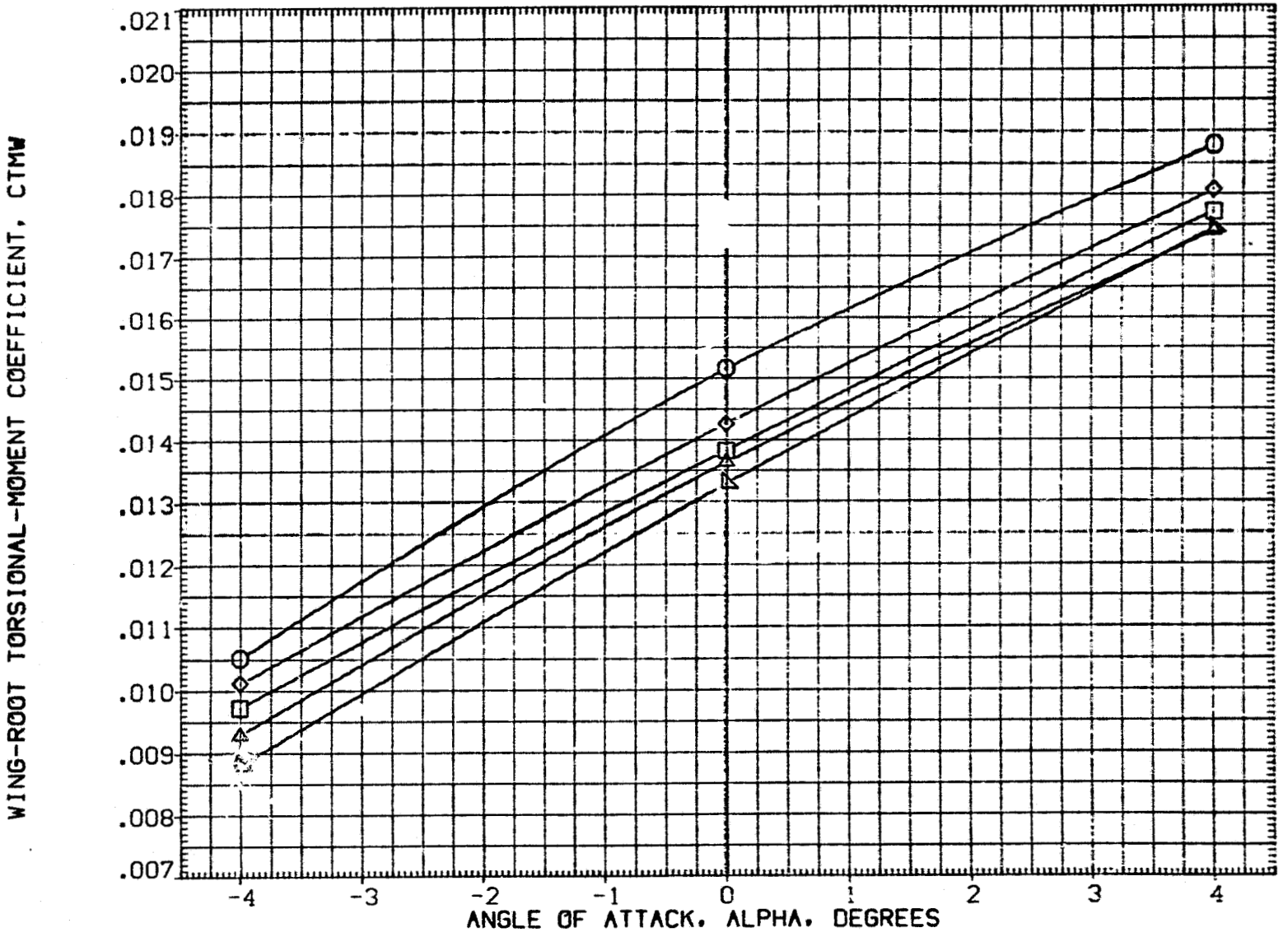



FIG. 56 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.1

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X22) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X25) | △ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X08) | ▽ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X03) | ◁ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

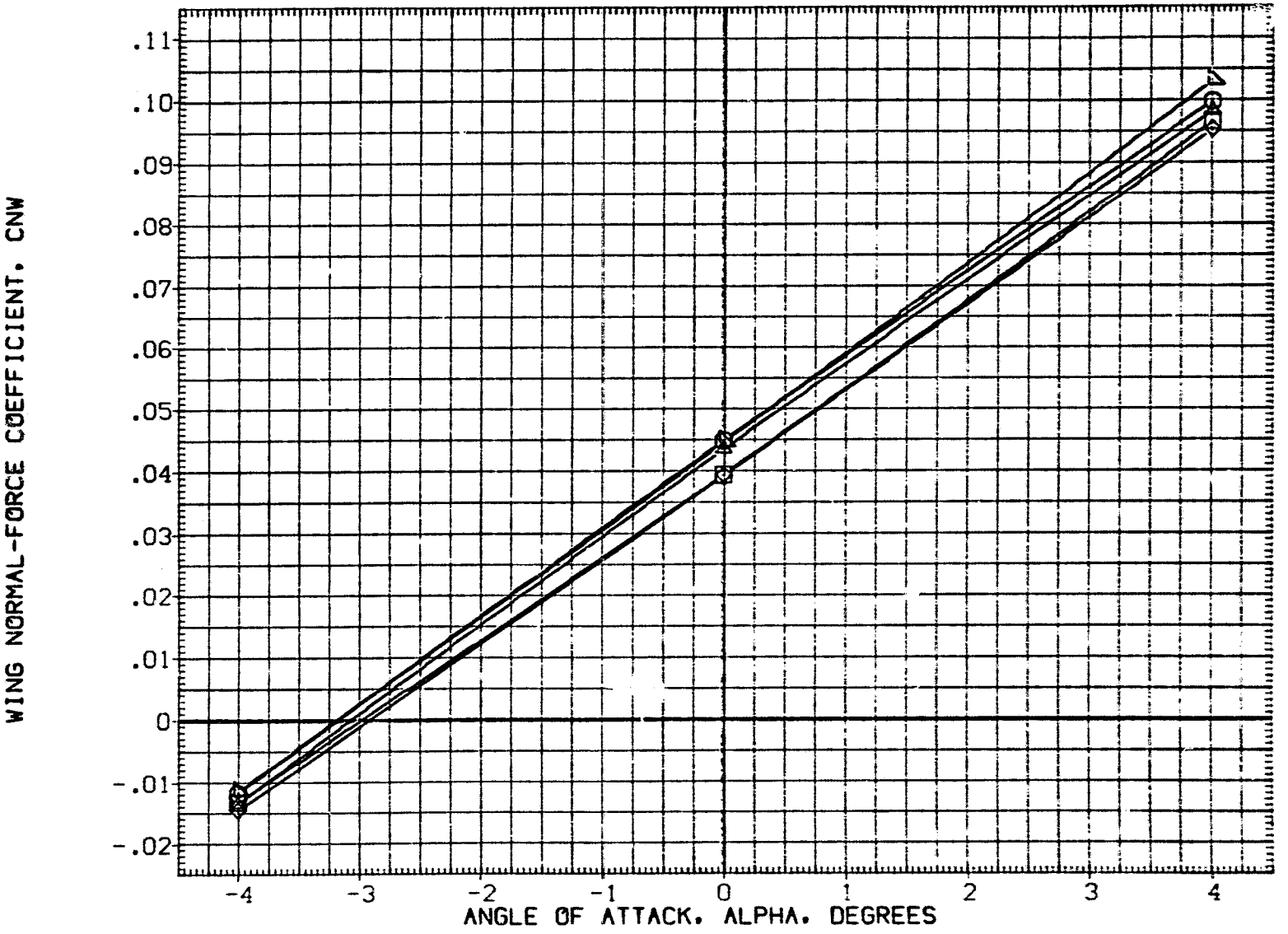



FIG. 56 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.1

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X31) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X23) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X26) | ARC 11-023 IA60 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X09) | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X04) | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

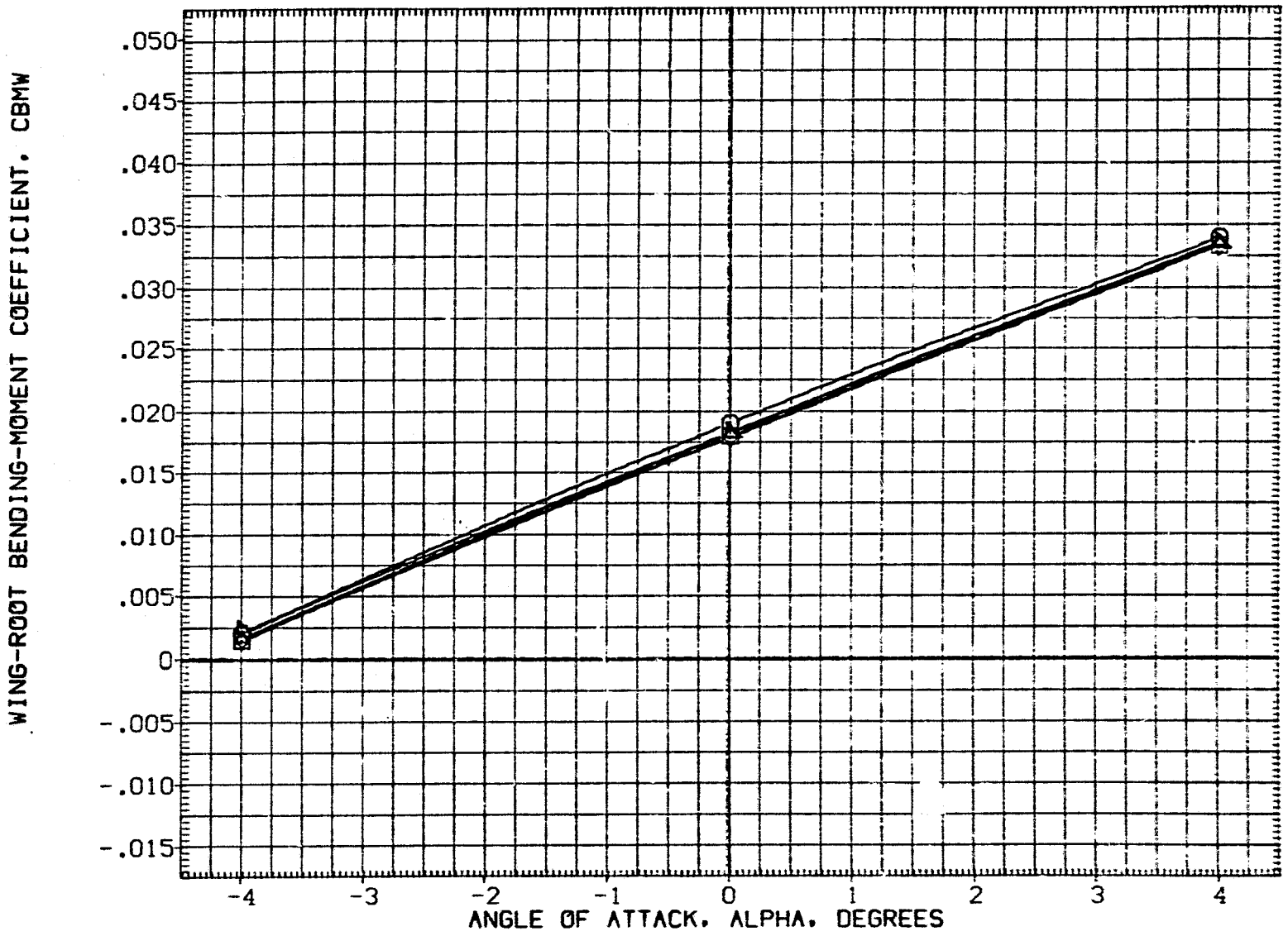



FIG. 57 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.25

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X23) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X26) | | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X09) | | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X04) | | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

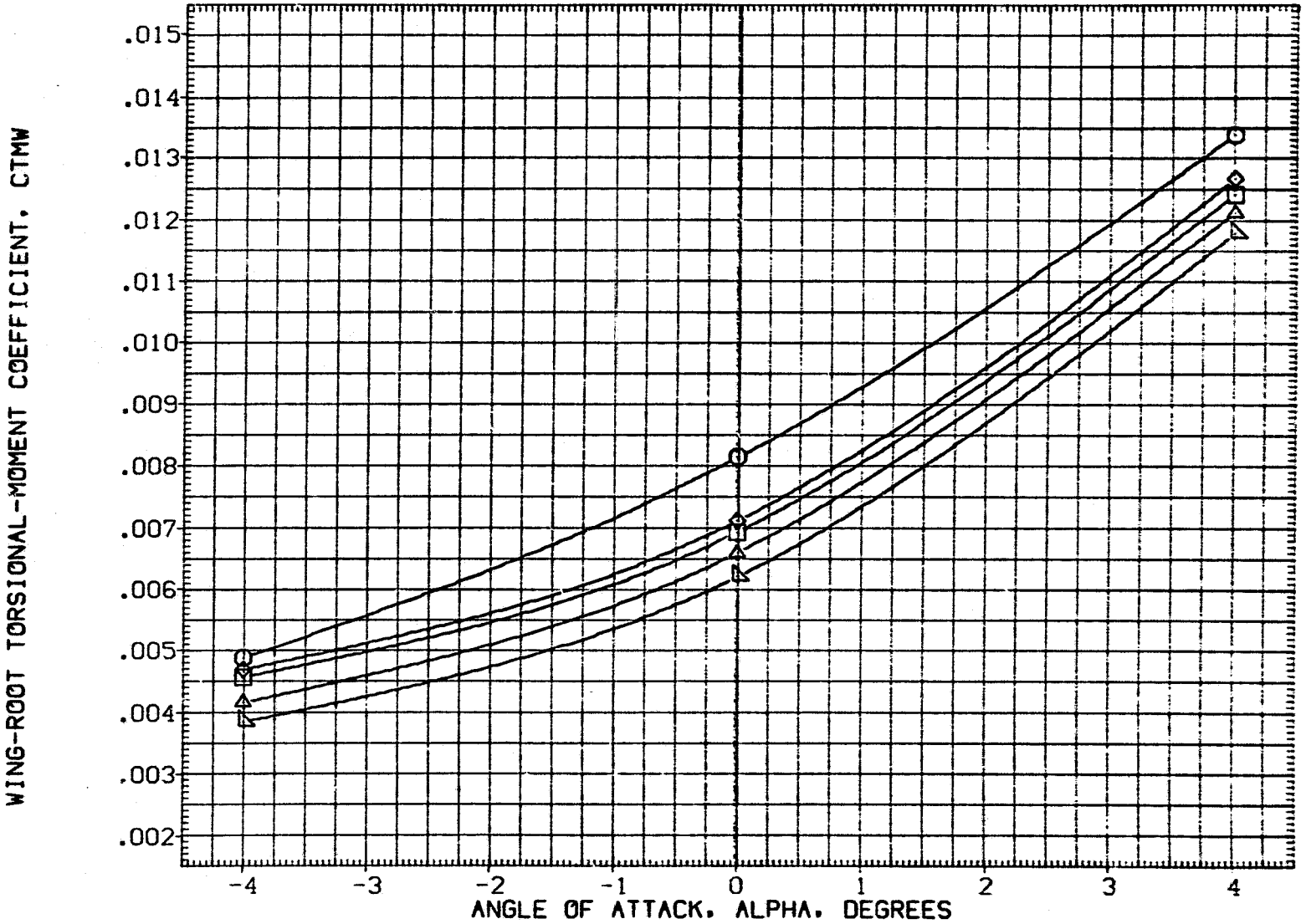



FIG. 57 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.25

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X23) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X26) | | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X09) | | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X04) | | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

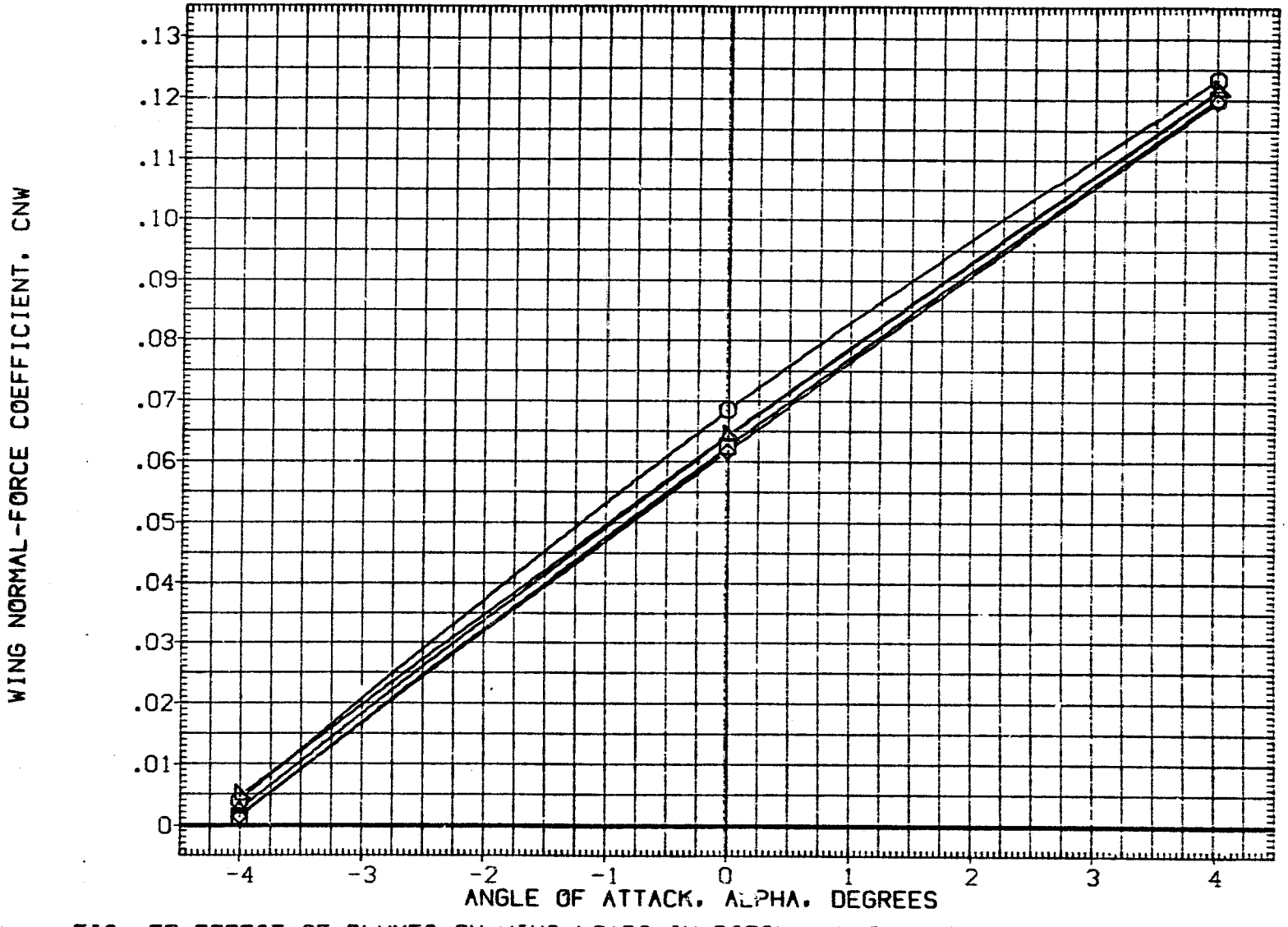



FIG. 57 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.25

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X24) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X27) | | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X10) | | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X05) | | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

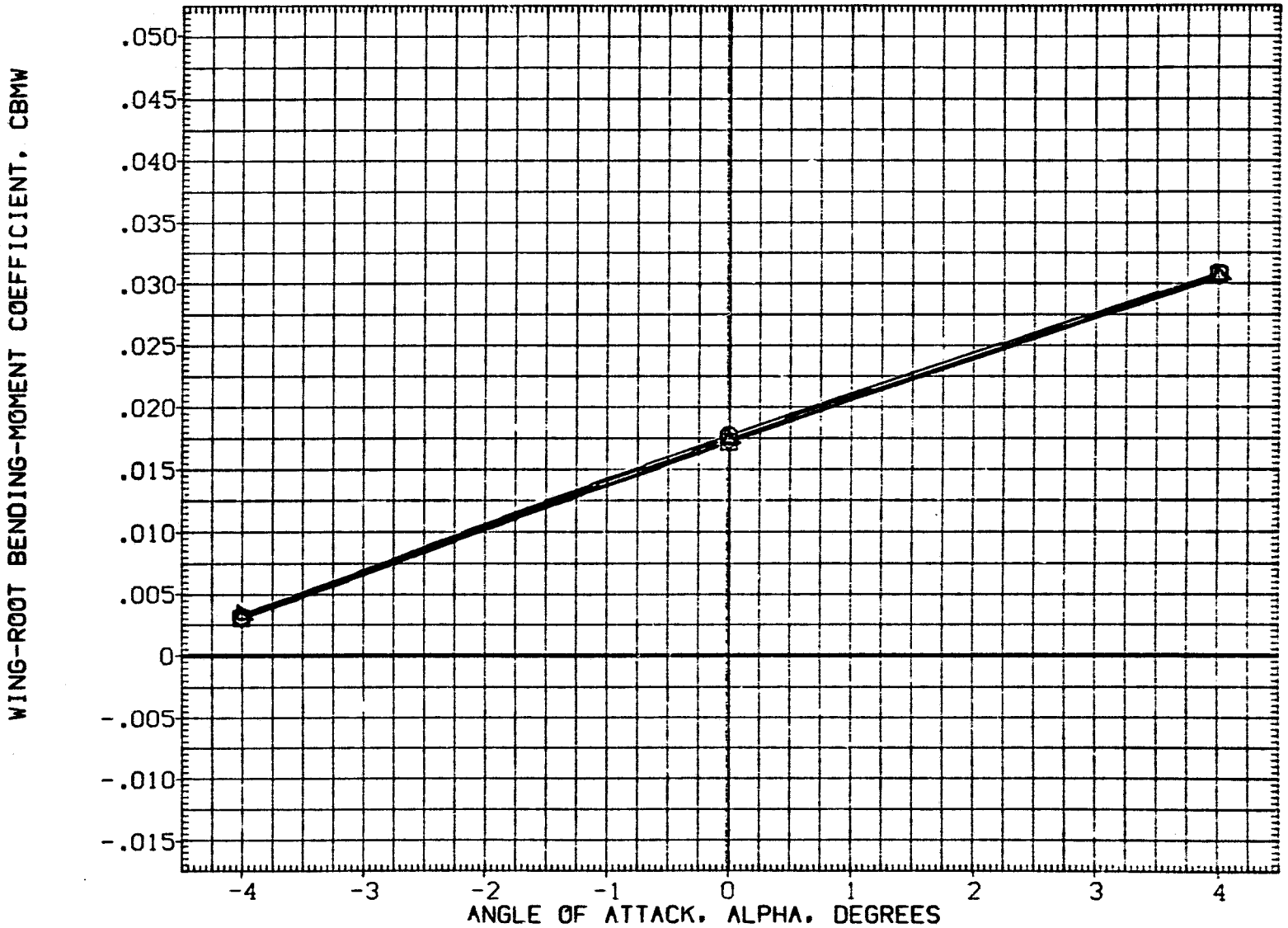



FIG. 58 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.4

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X27) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X10) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X05) | ▽ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

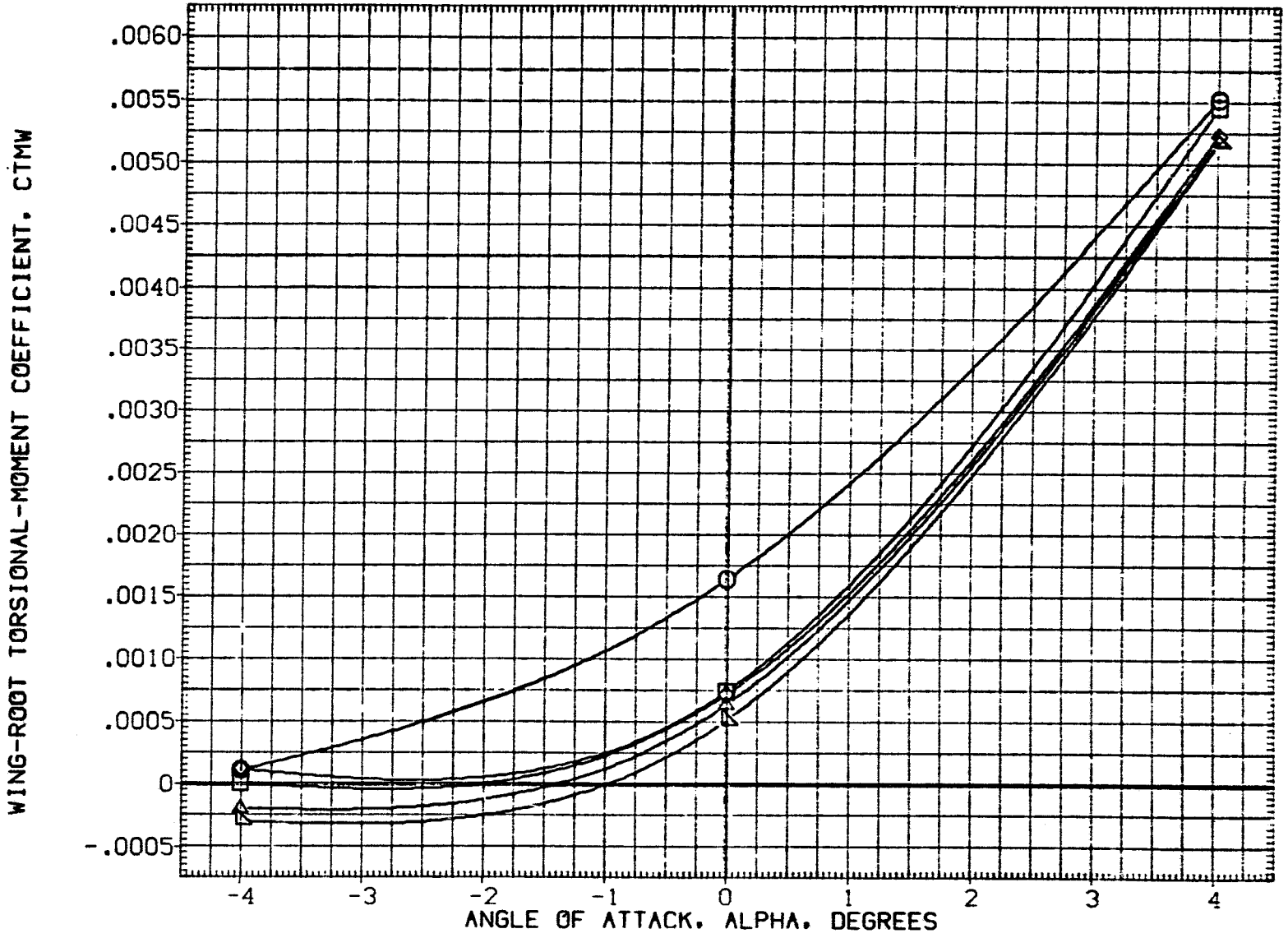



FIG. 58 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.4

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X27) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X10) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X05) | ▽ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

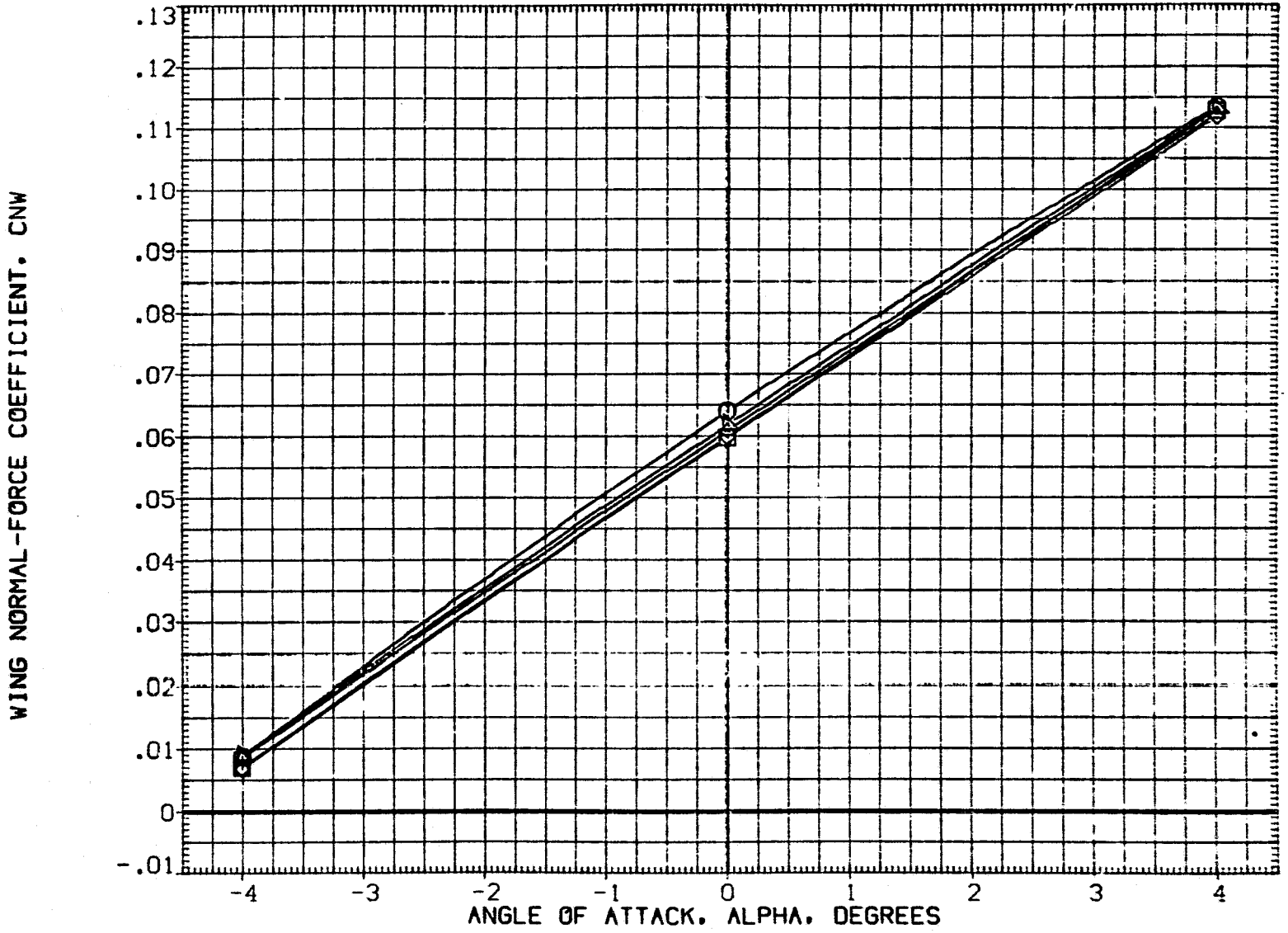



FIG. 58 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.4

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X20) | ⊡ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X06) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X01) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

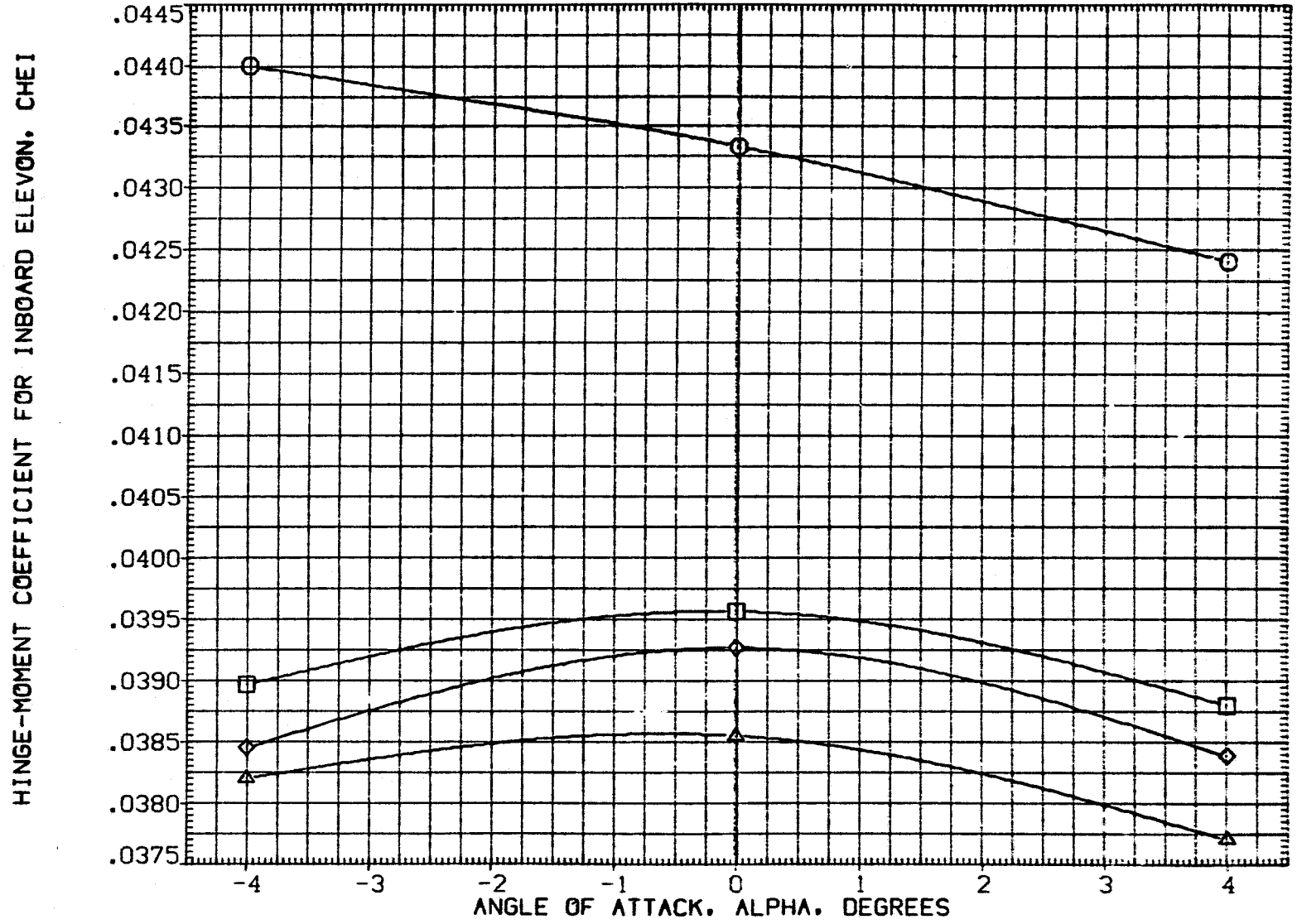



FIG. 59 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=0.6

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X06) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X01) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

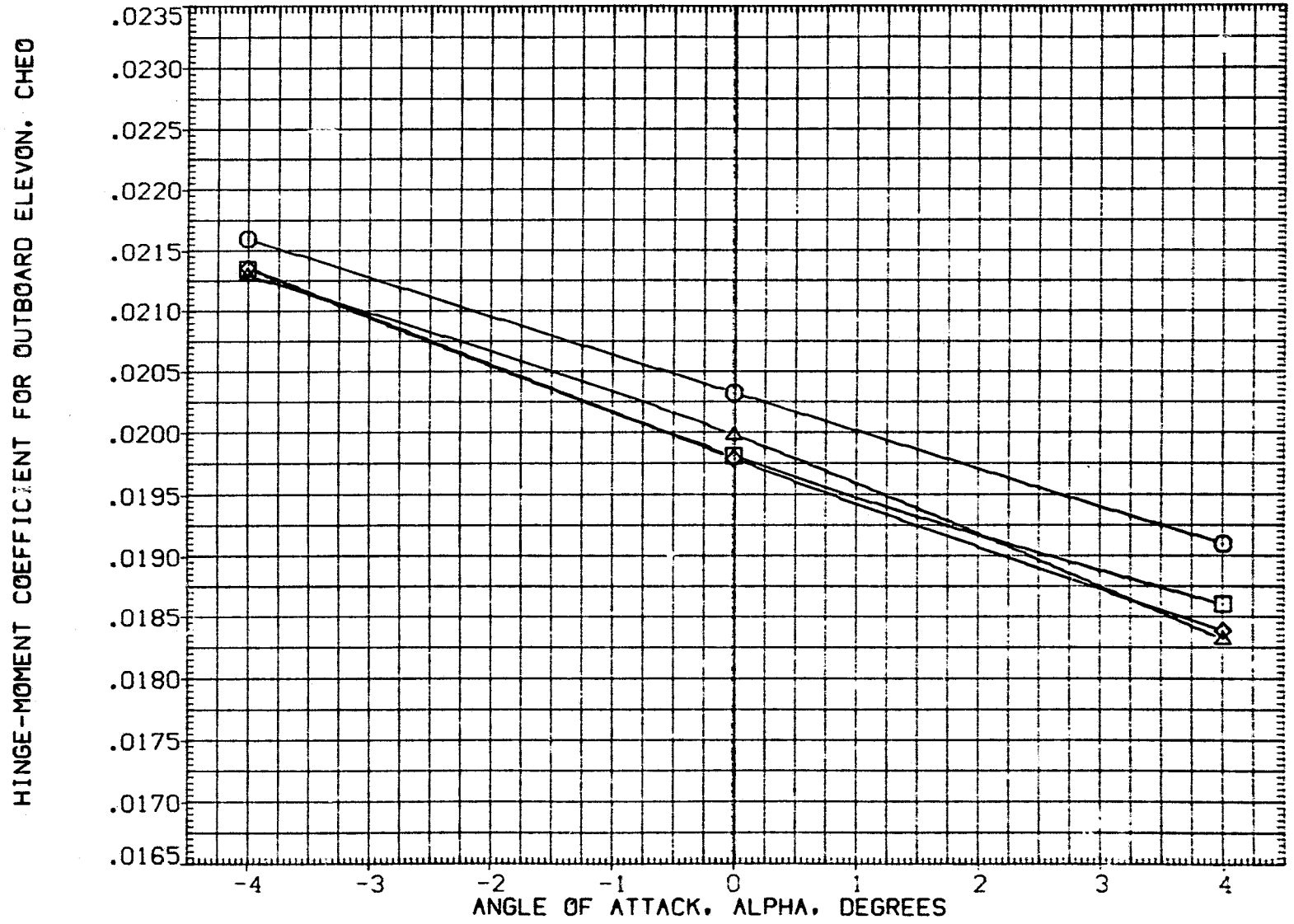



FIG. 59 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=0.6

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X21) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X07) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X02) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

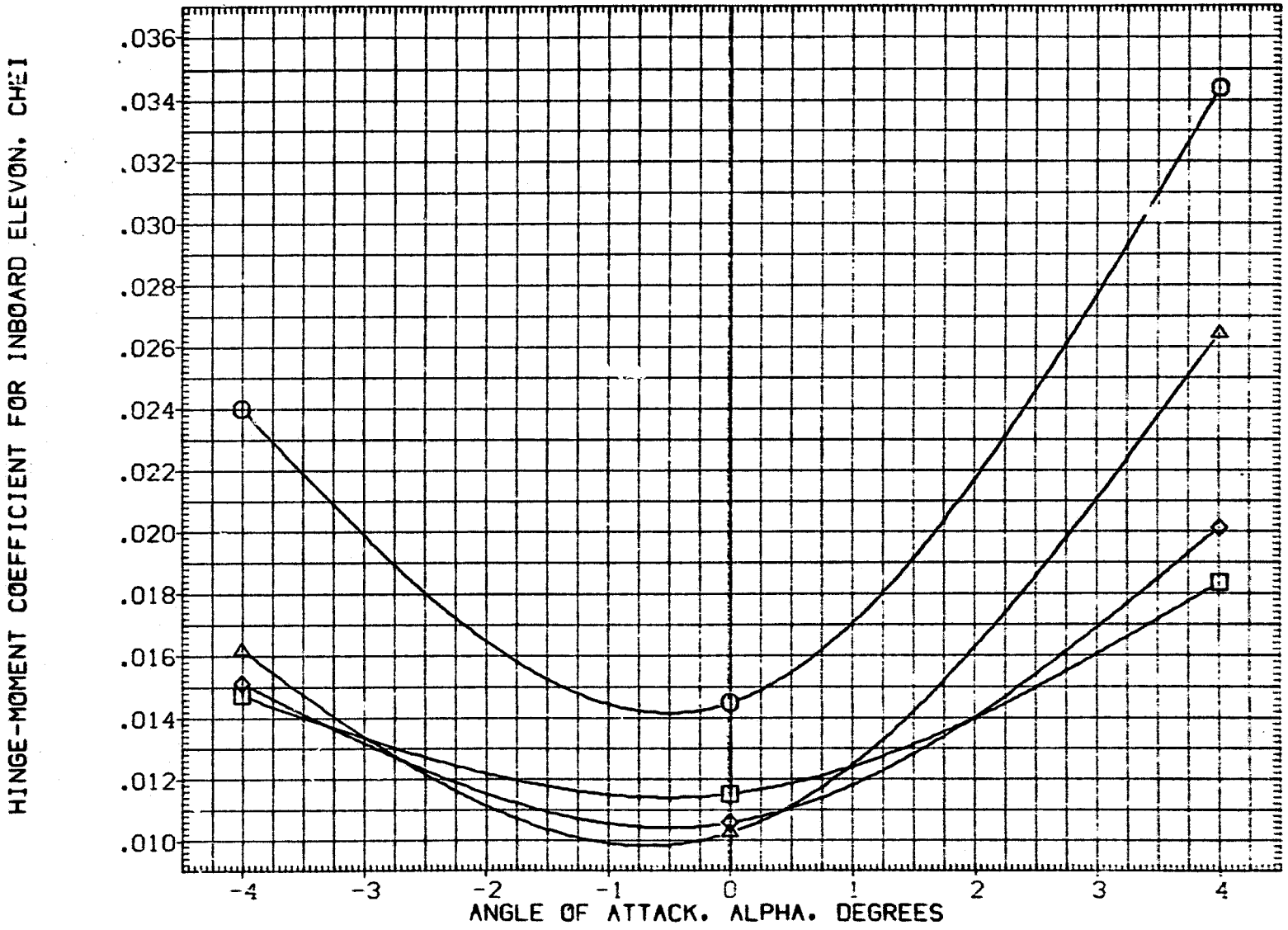



FIG. 60 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=0.9

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X21) | ◫ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X07) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X02) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

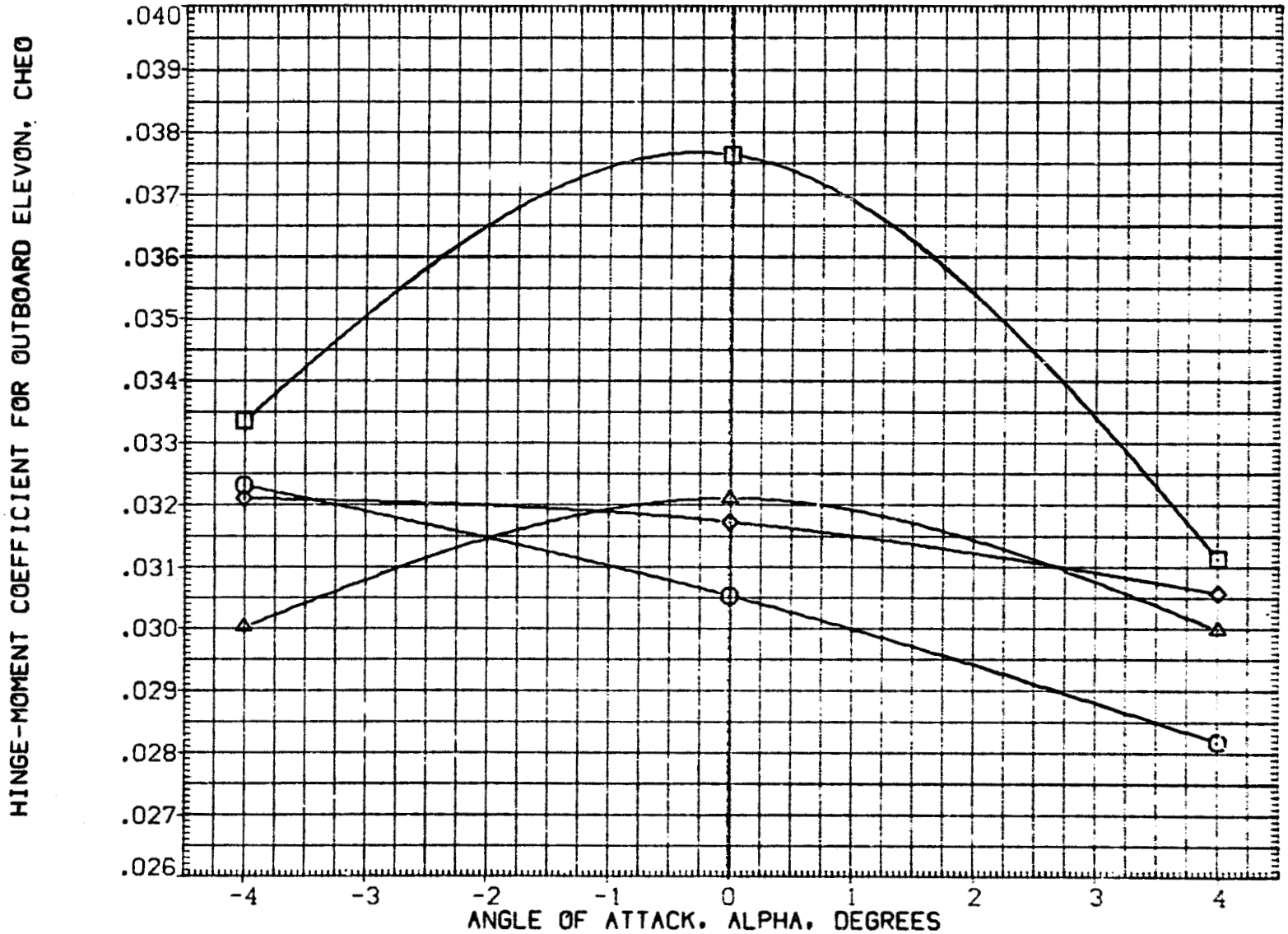



FIG. 60 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=0.9

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X30) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X22) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X25) | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X08) | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X03) | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

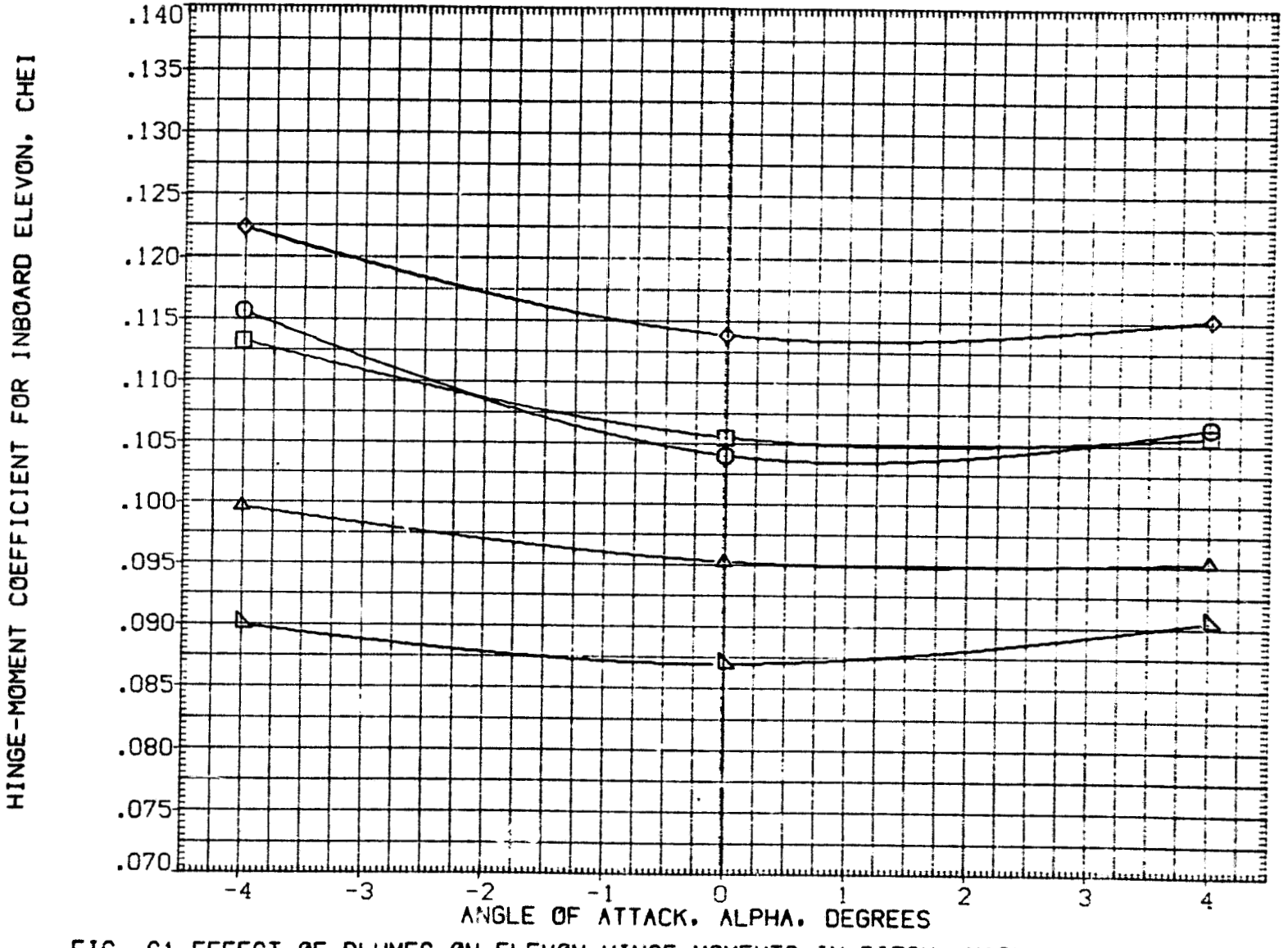



FIG. 61 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.1

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | | ARC 11-023 IA8D OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X22) | | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X25) | | ARC 11-023 IA8D OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X08) | | ARC 11-023 IA8D OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X03) | | ARC 11-023 IA8D OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

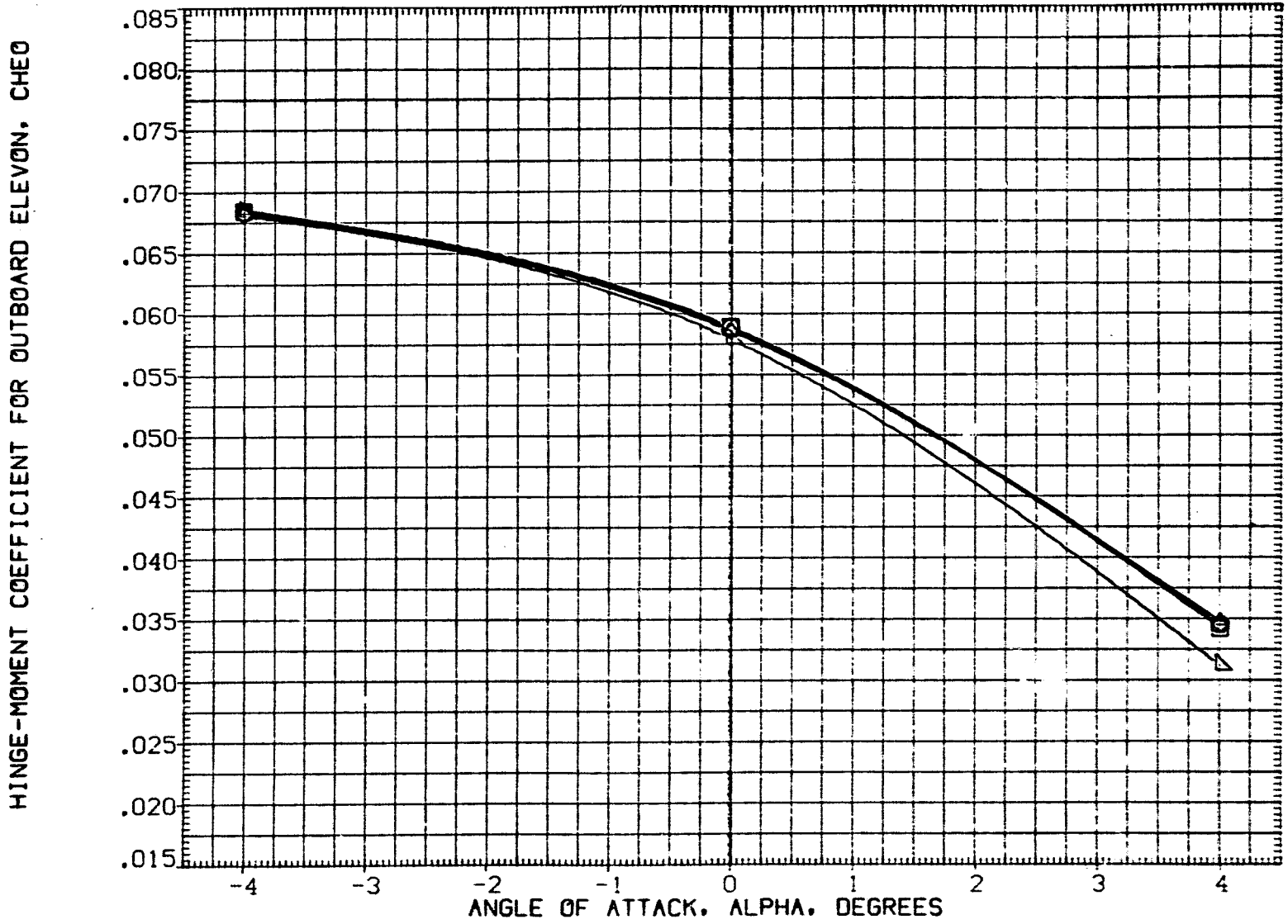



FIG. 61 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.1

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X26) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X09) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X04) | ▽ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

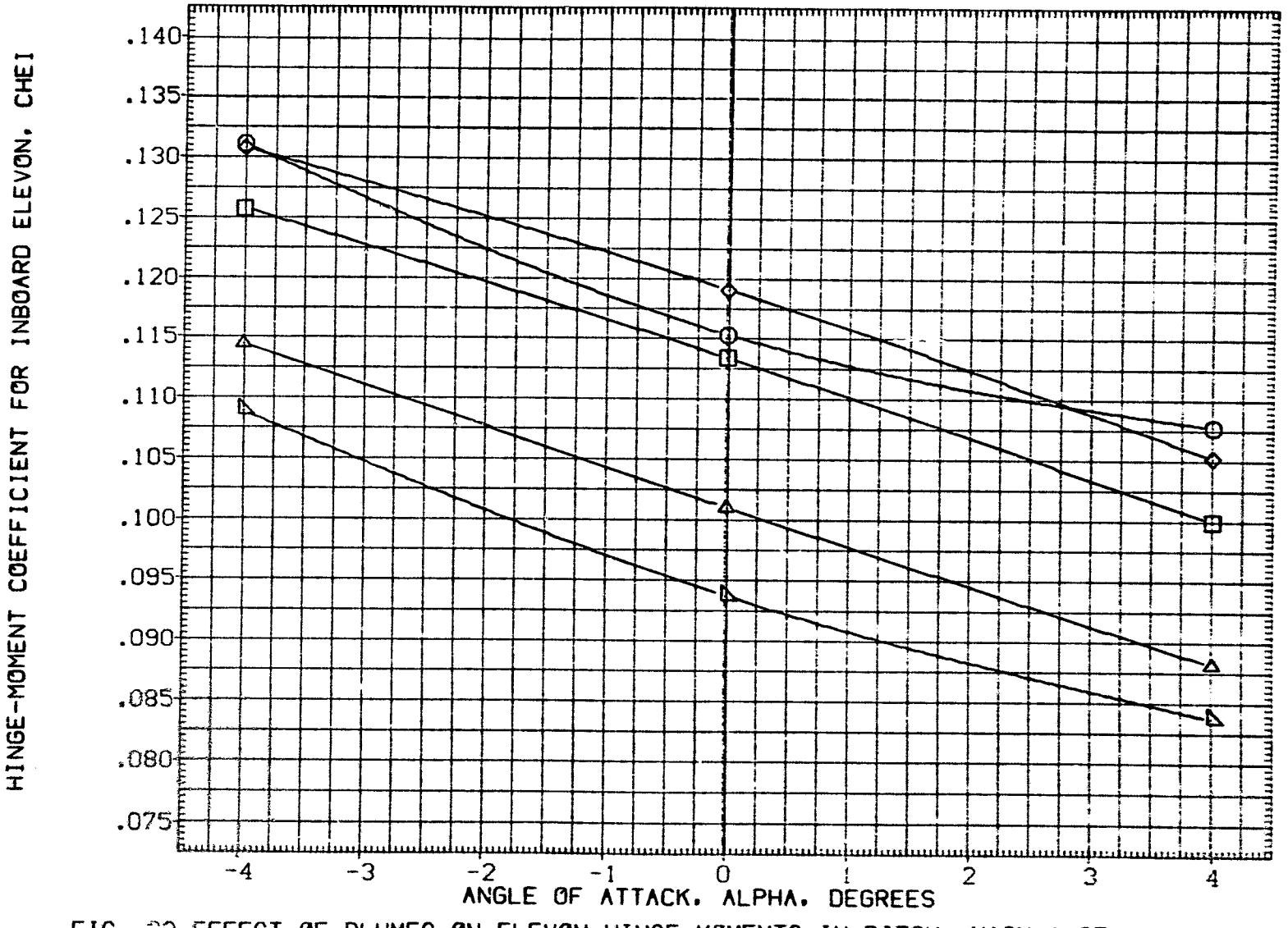



FIG. 62 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.25

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X23) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X26) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X09) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X04) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

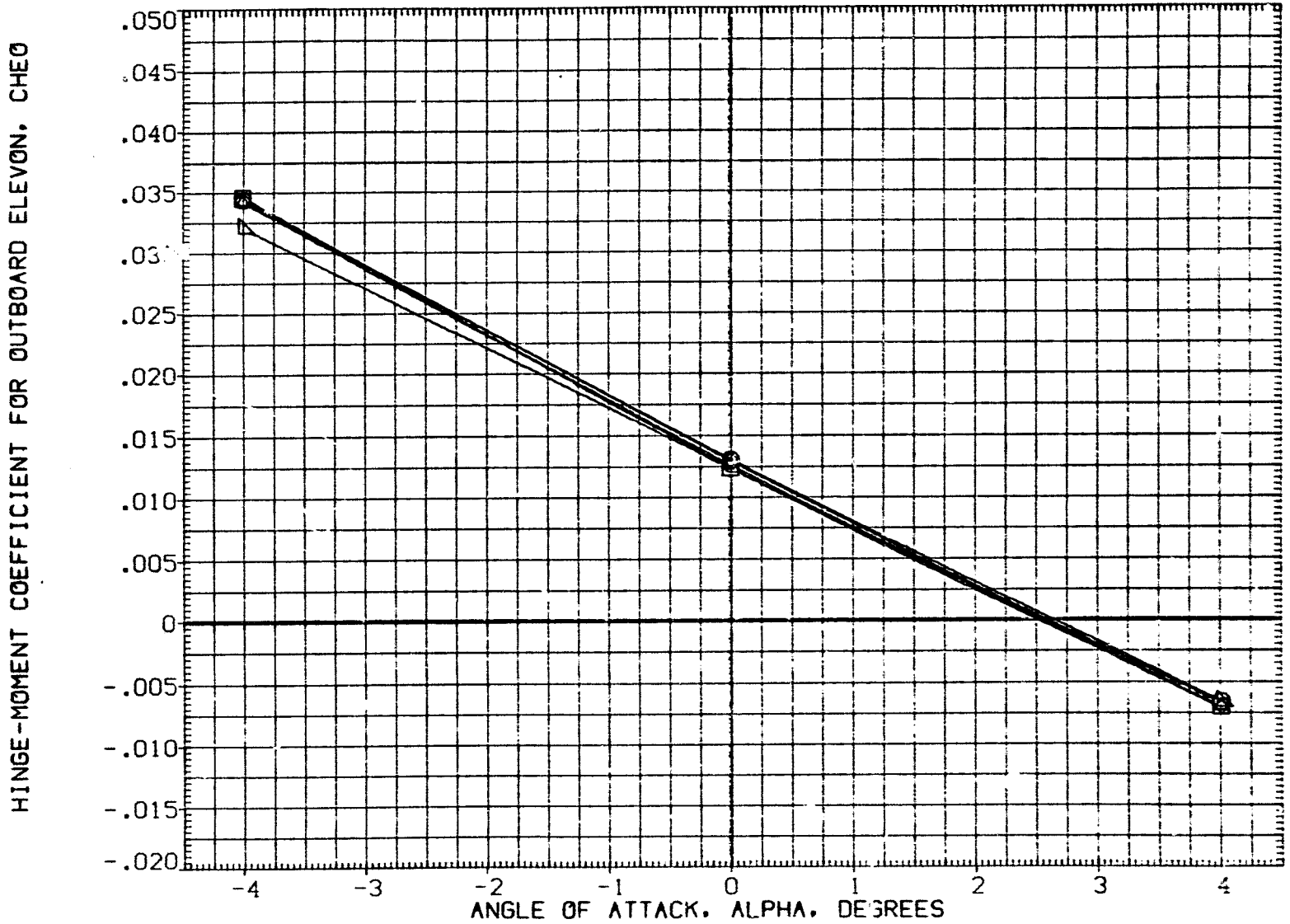



FIG. 62 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.25

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X27) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X10) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X05) | ◺ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

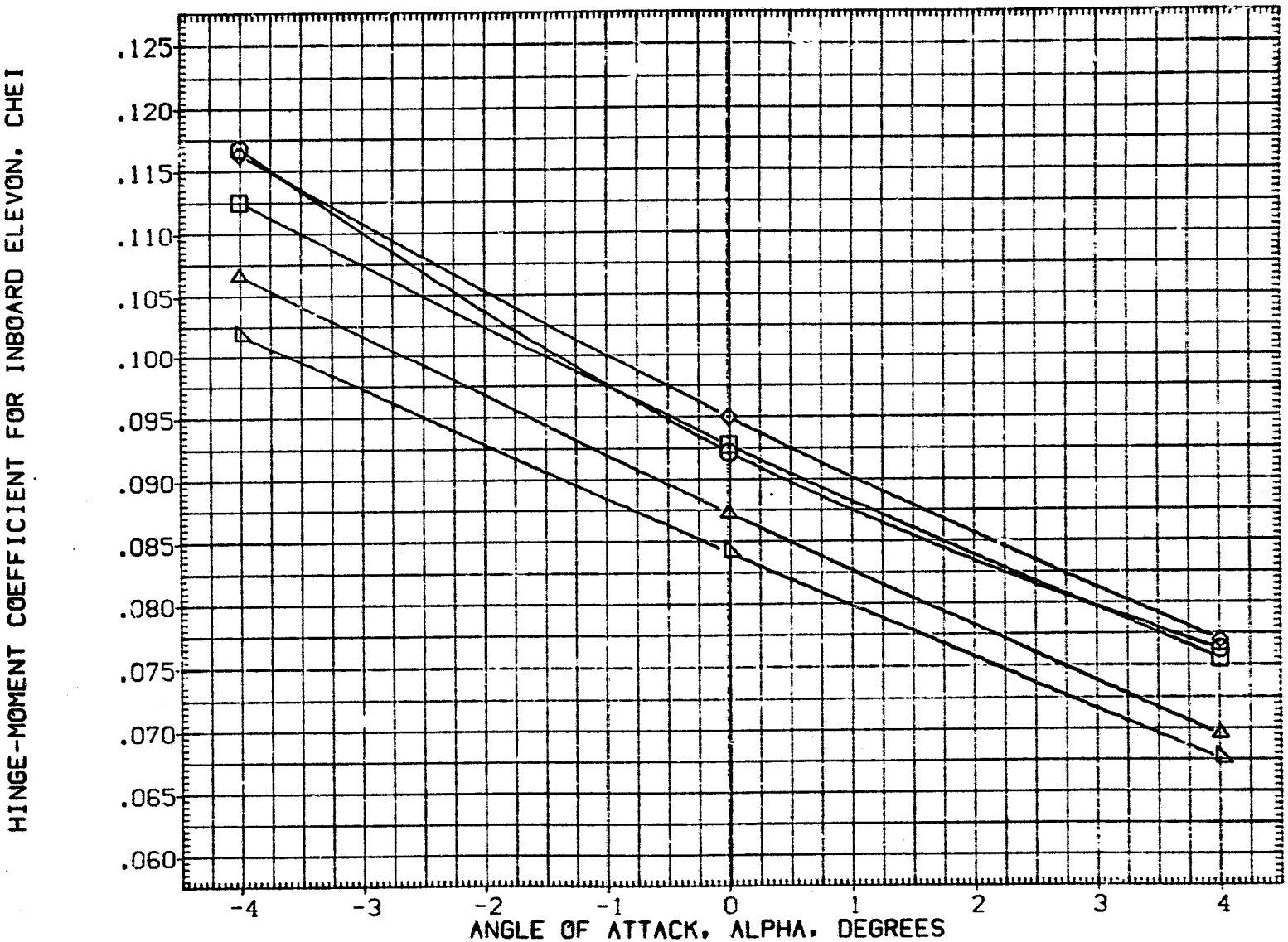



FIG. 63 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.4

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X24) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X27) | | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X10) | | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X05) | | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

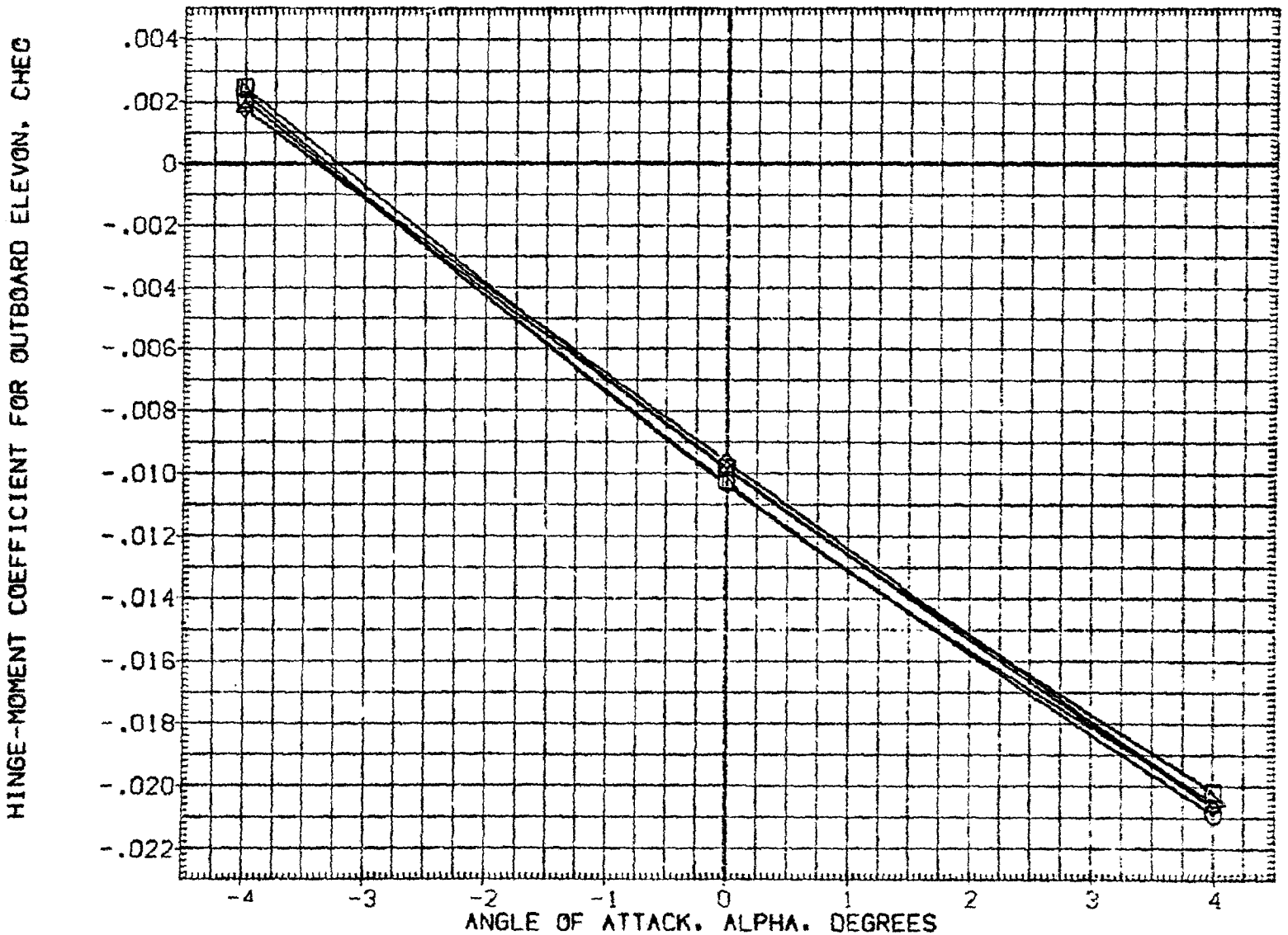



FIG.63A EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.4

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y06) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y01) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

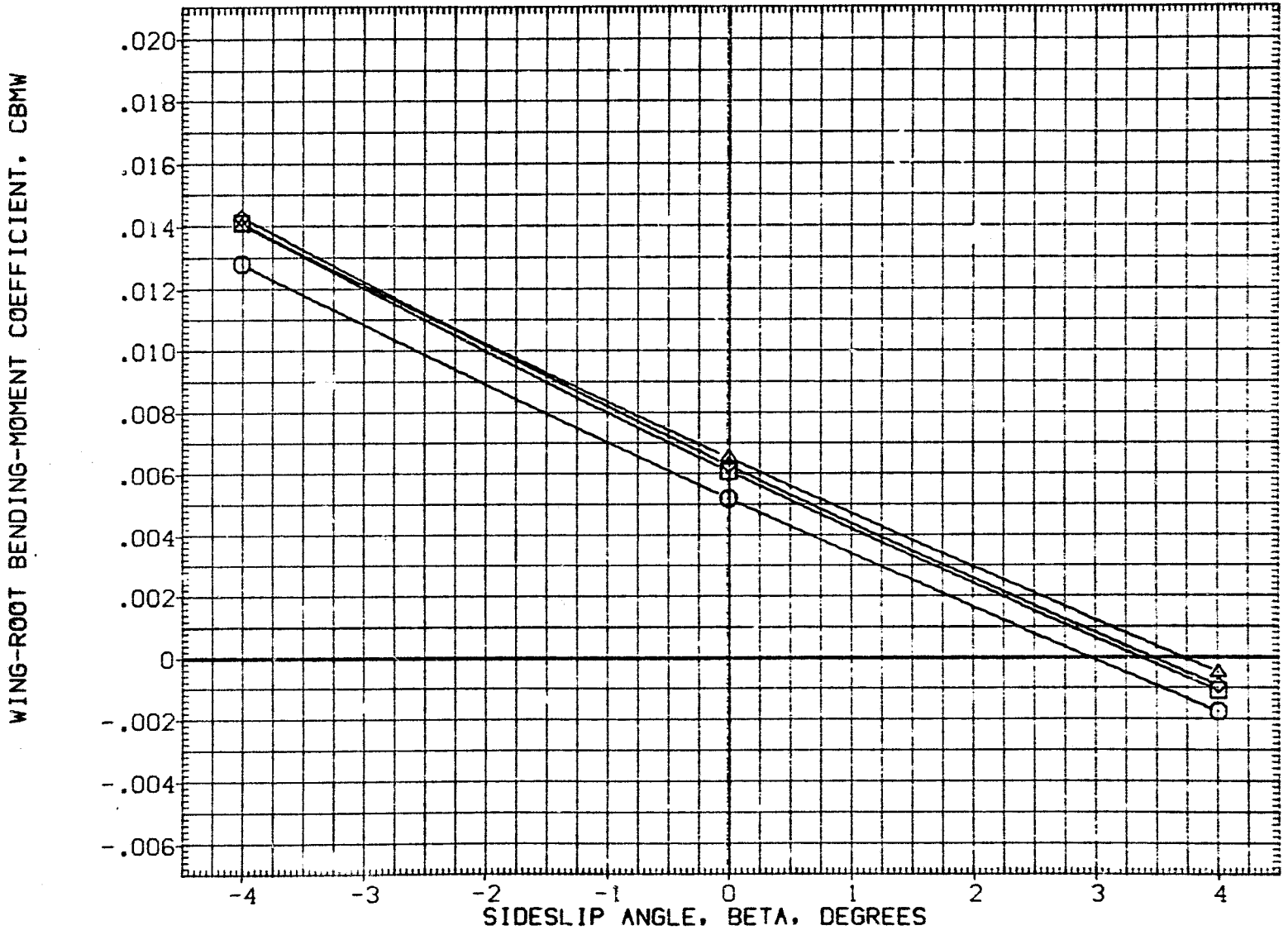



FIG. 64 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 0TS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA80 0TS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y06) | ◇ | ARC 11-023 IA80 0TS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y01) | △ | ARC 11-023 IA80 0TS (SRB NOM++) (SSME NOM ) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

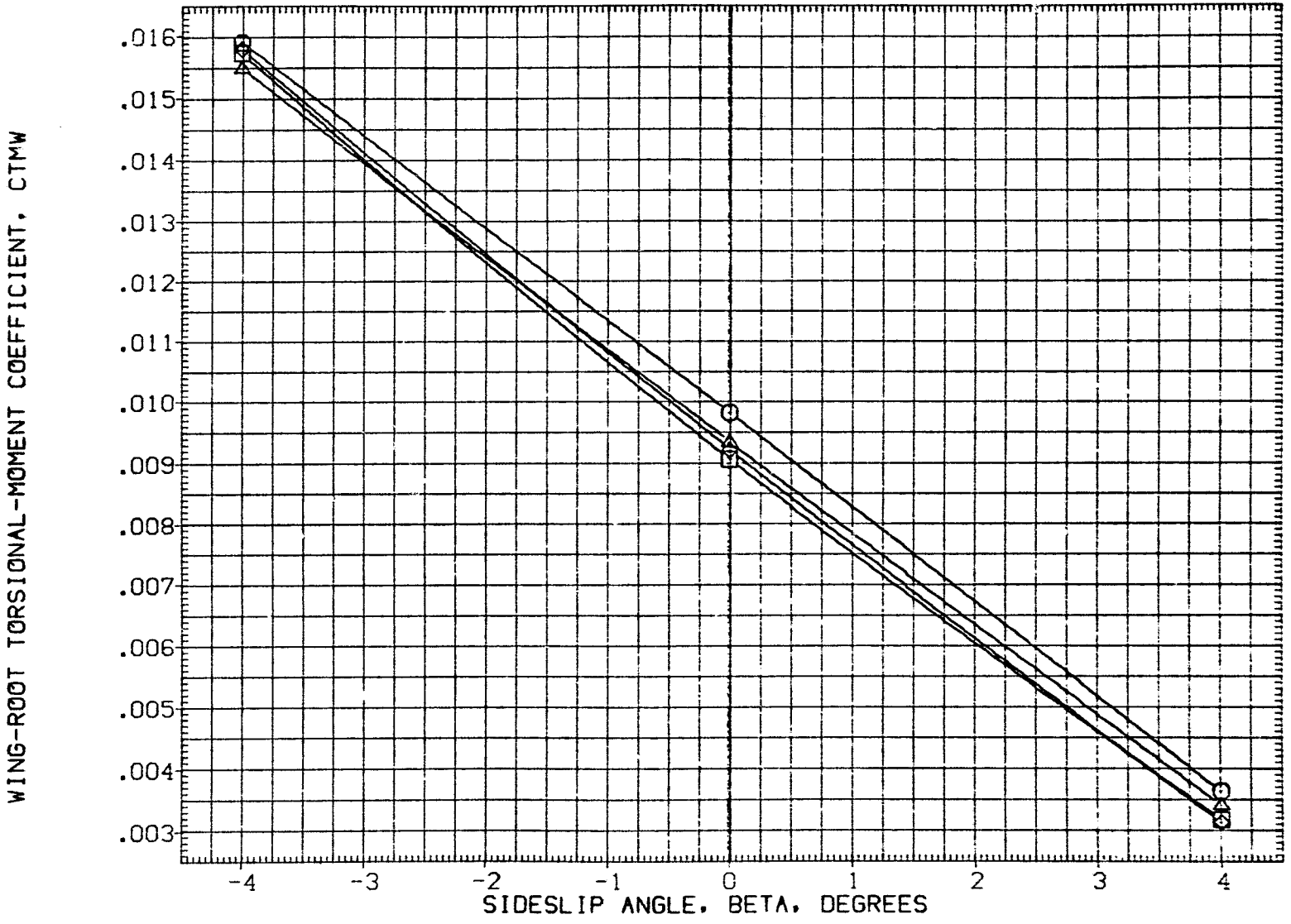



FIG. 64 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.6

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-CB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y06) | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y01) | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

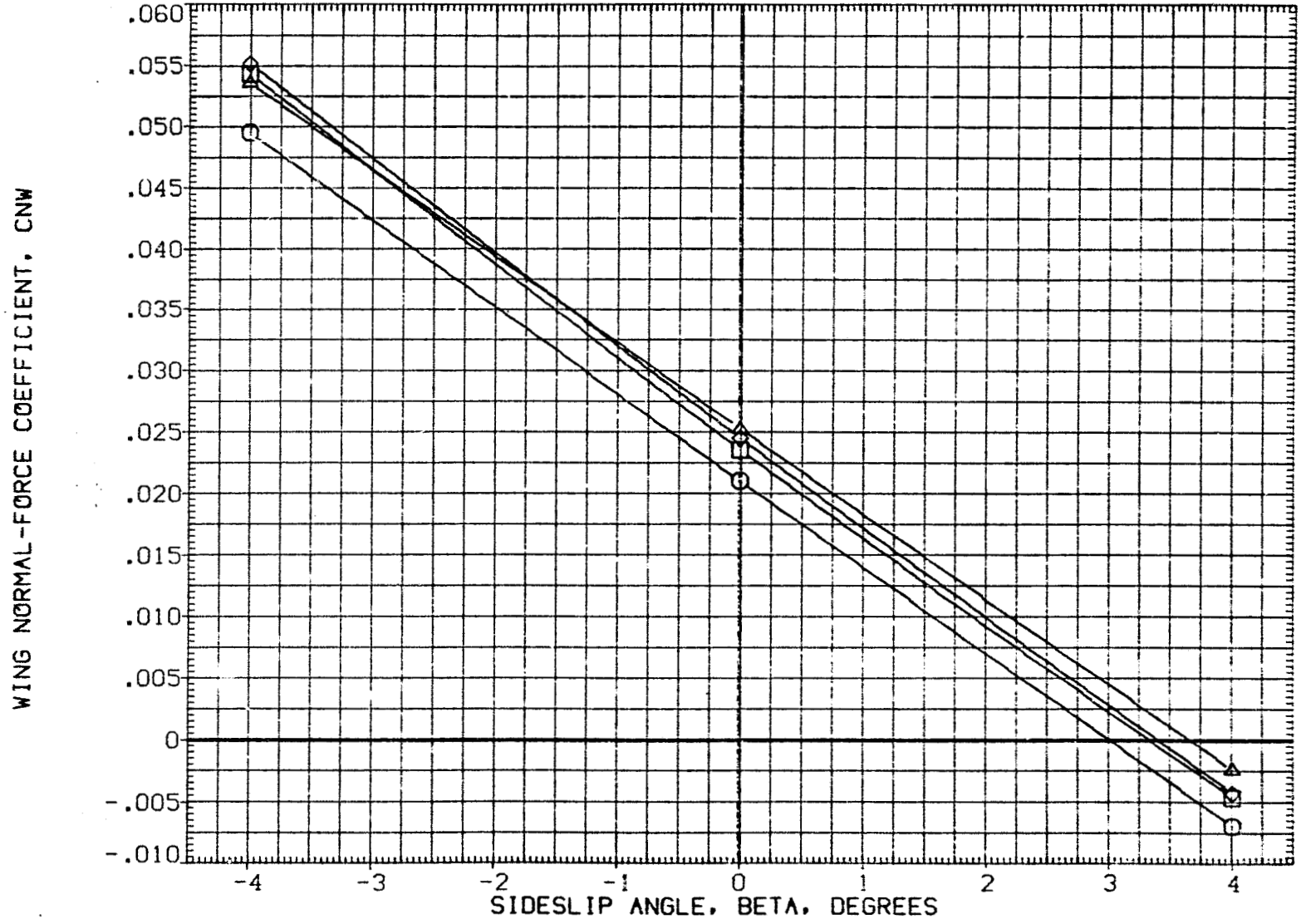



FIG. 64 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y07) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y02) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

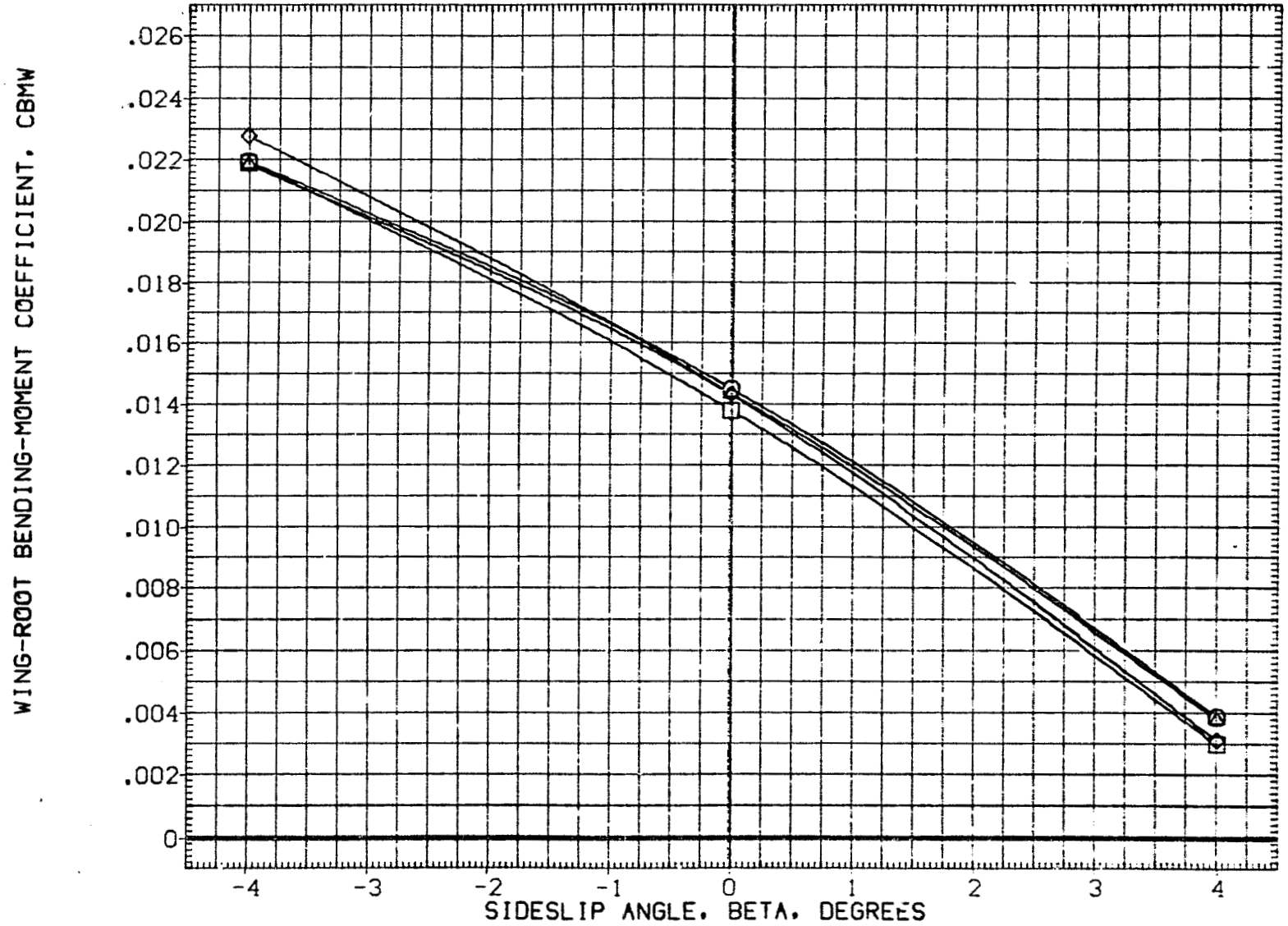



FIG. 65 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y07) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y02) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

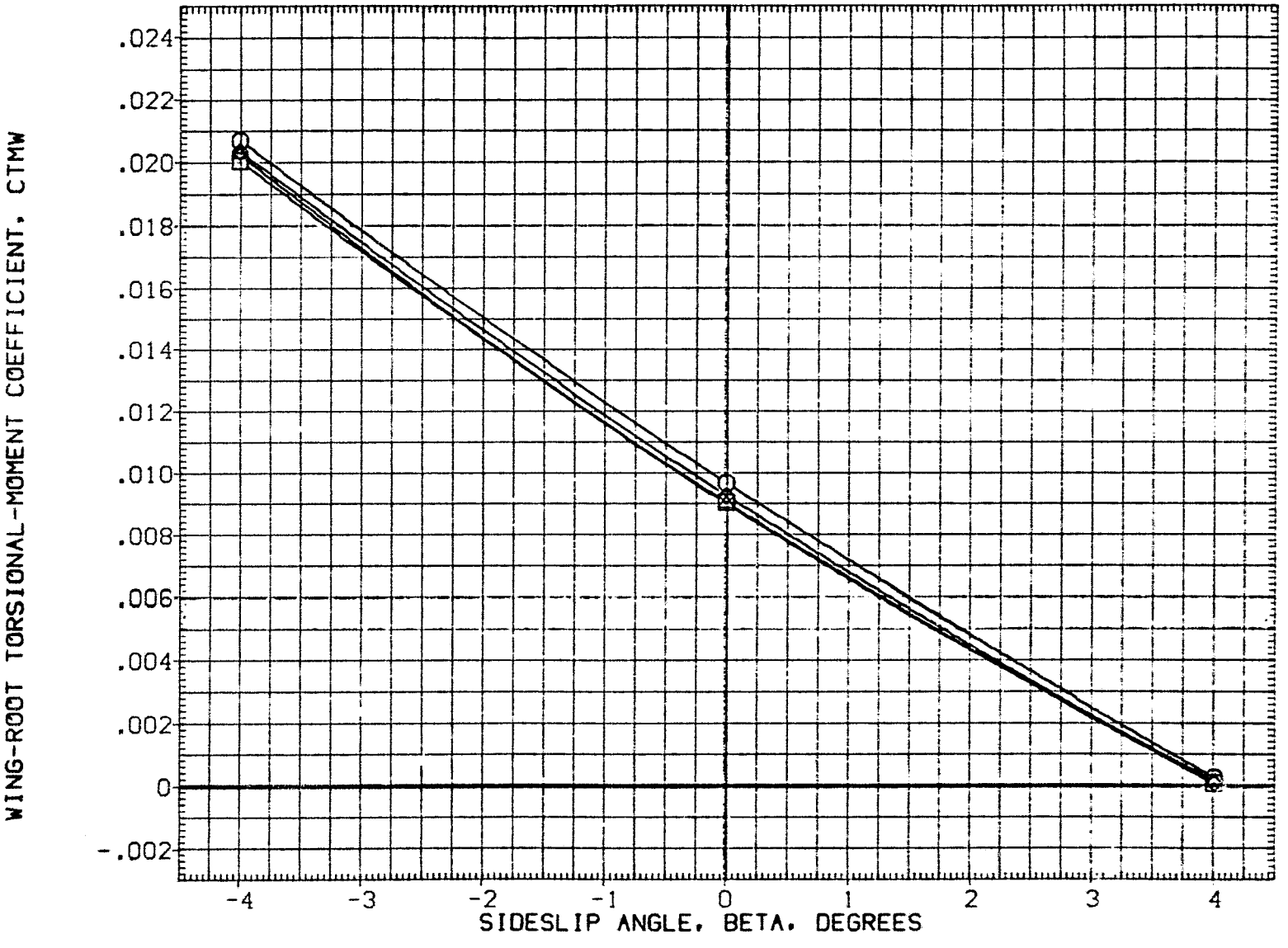



FIG. 65 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y07) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y02) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

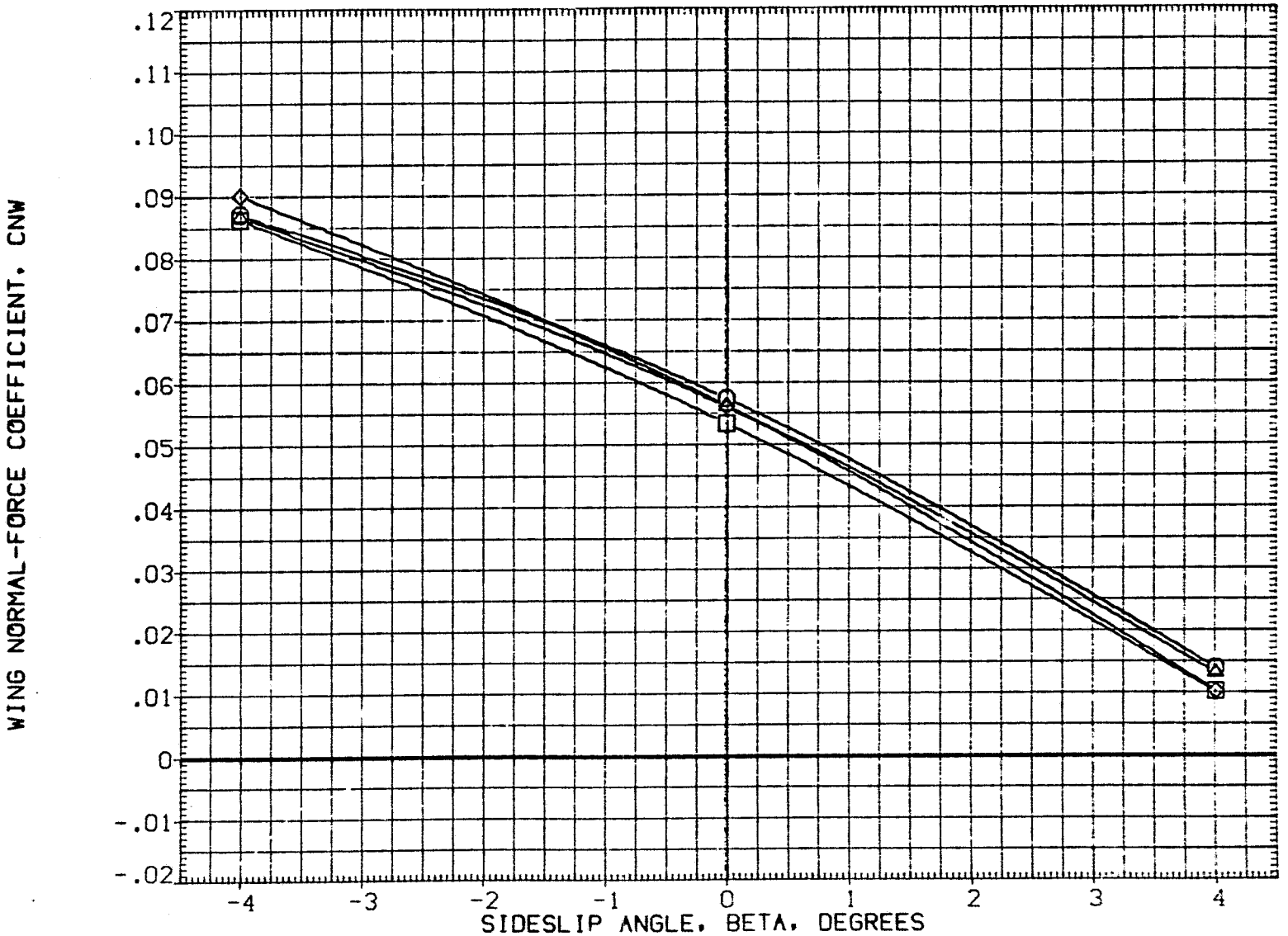



FIG. 65 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | ⊡ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y25) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y08) | ◁ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y03) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

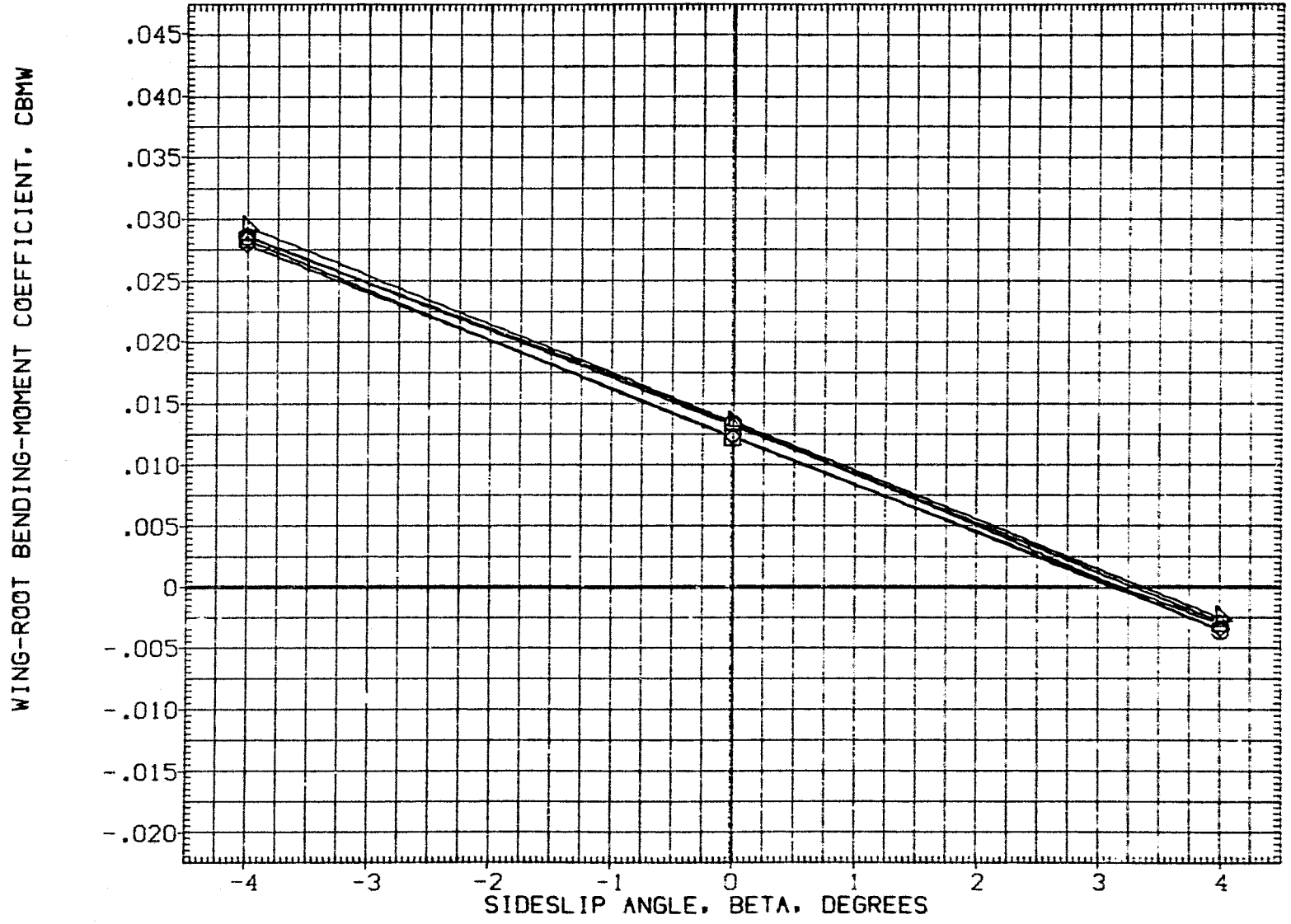



FIG. 66 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y25) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y08) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y03) | ▽ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

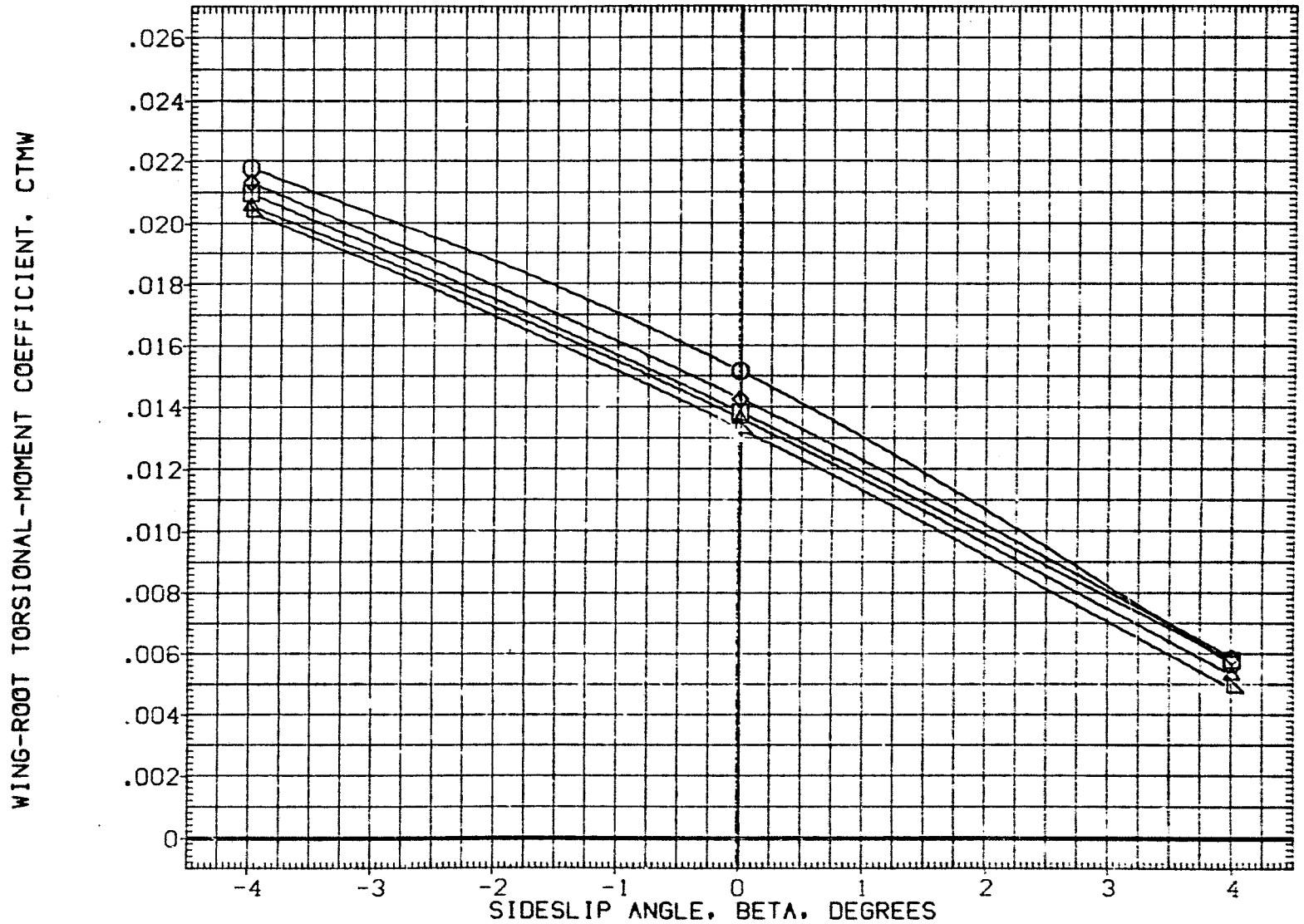



FIG. 66 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y25) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y08) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y03) | ▽ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

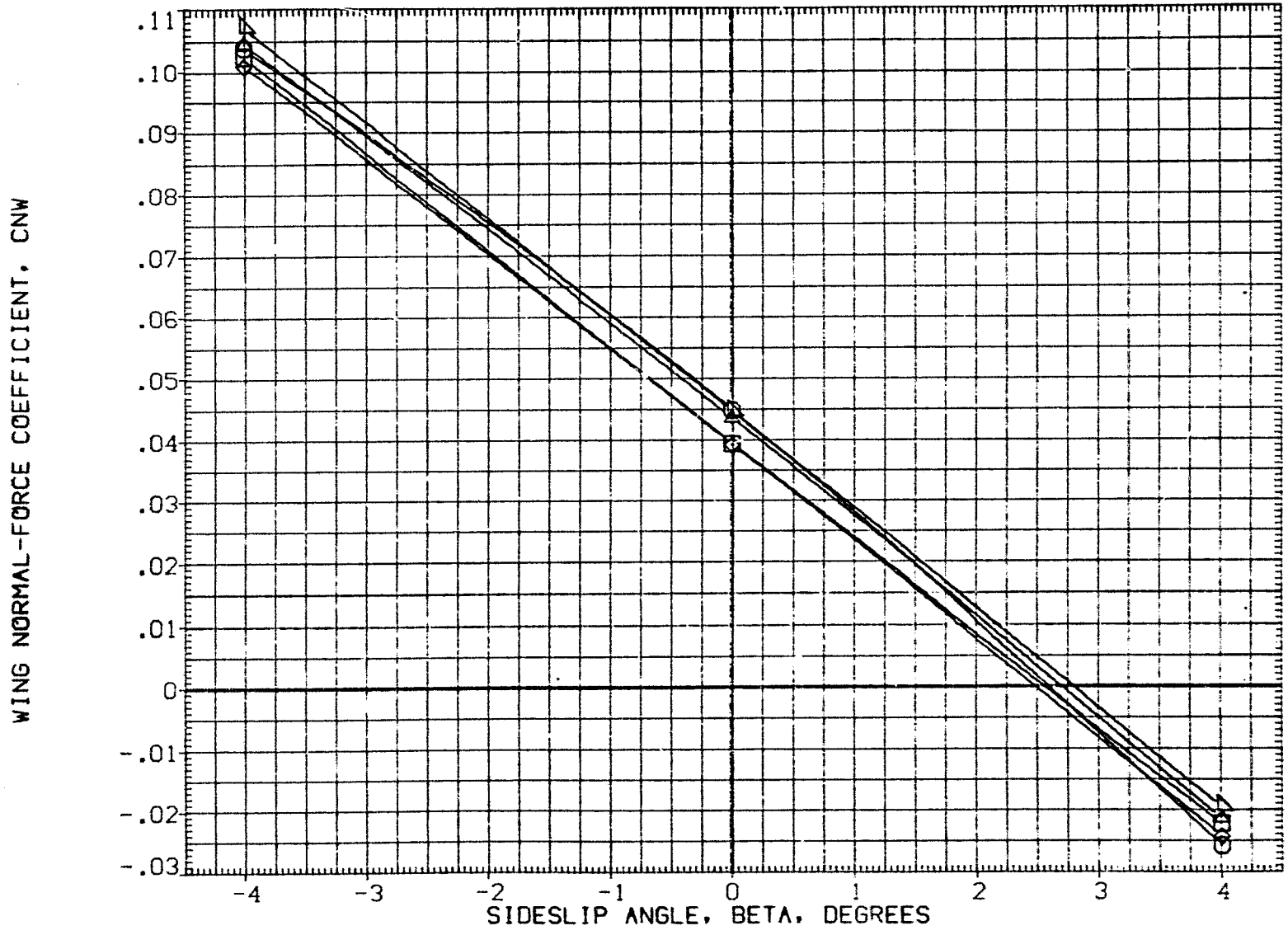



FIG. 66 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y26) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y09) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y04) | ▷ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

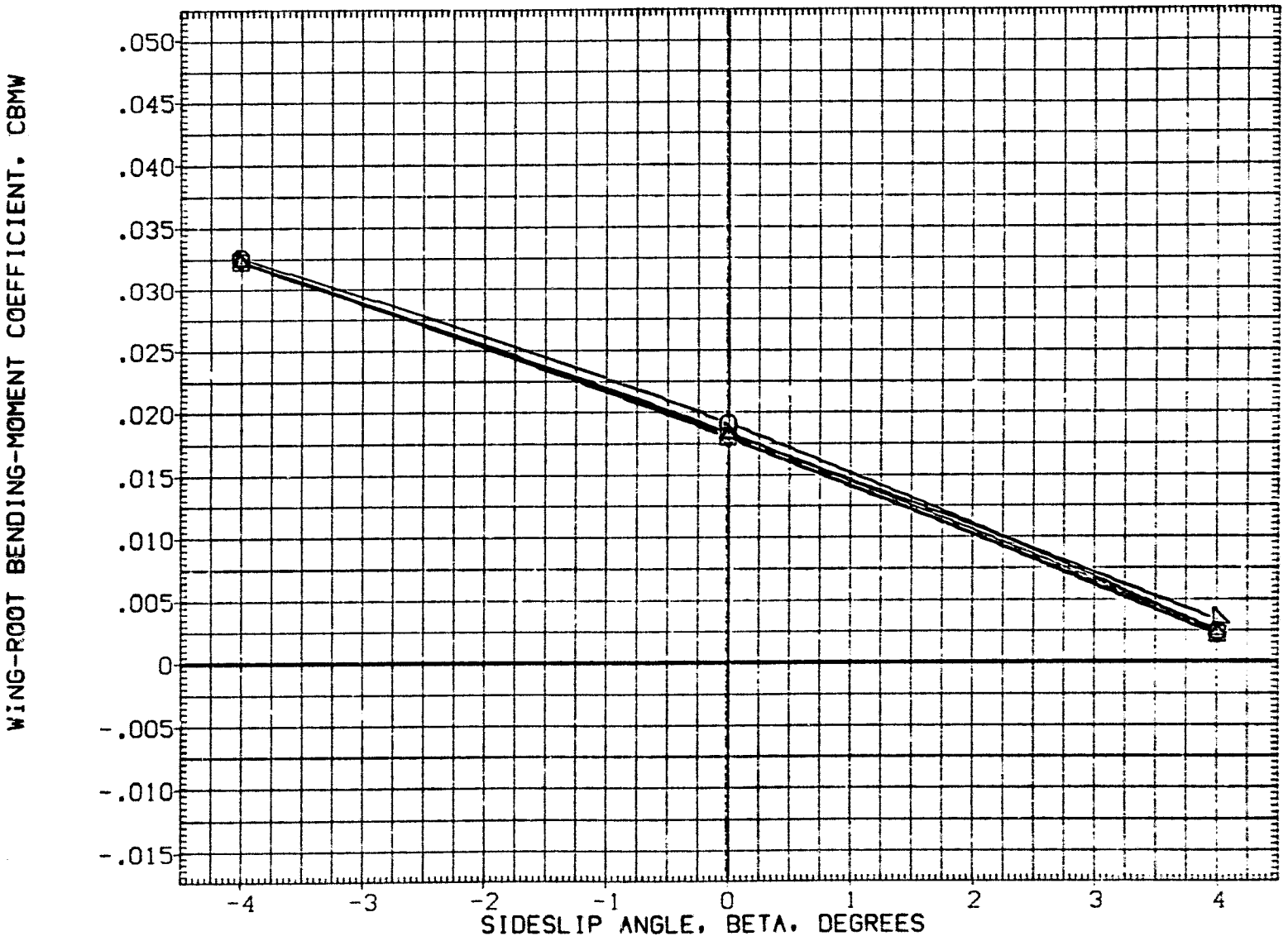



FIG. 67 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y26) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y09) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y04) | ▷ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

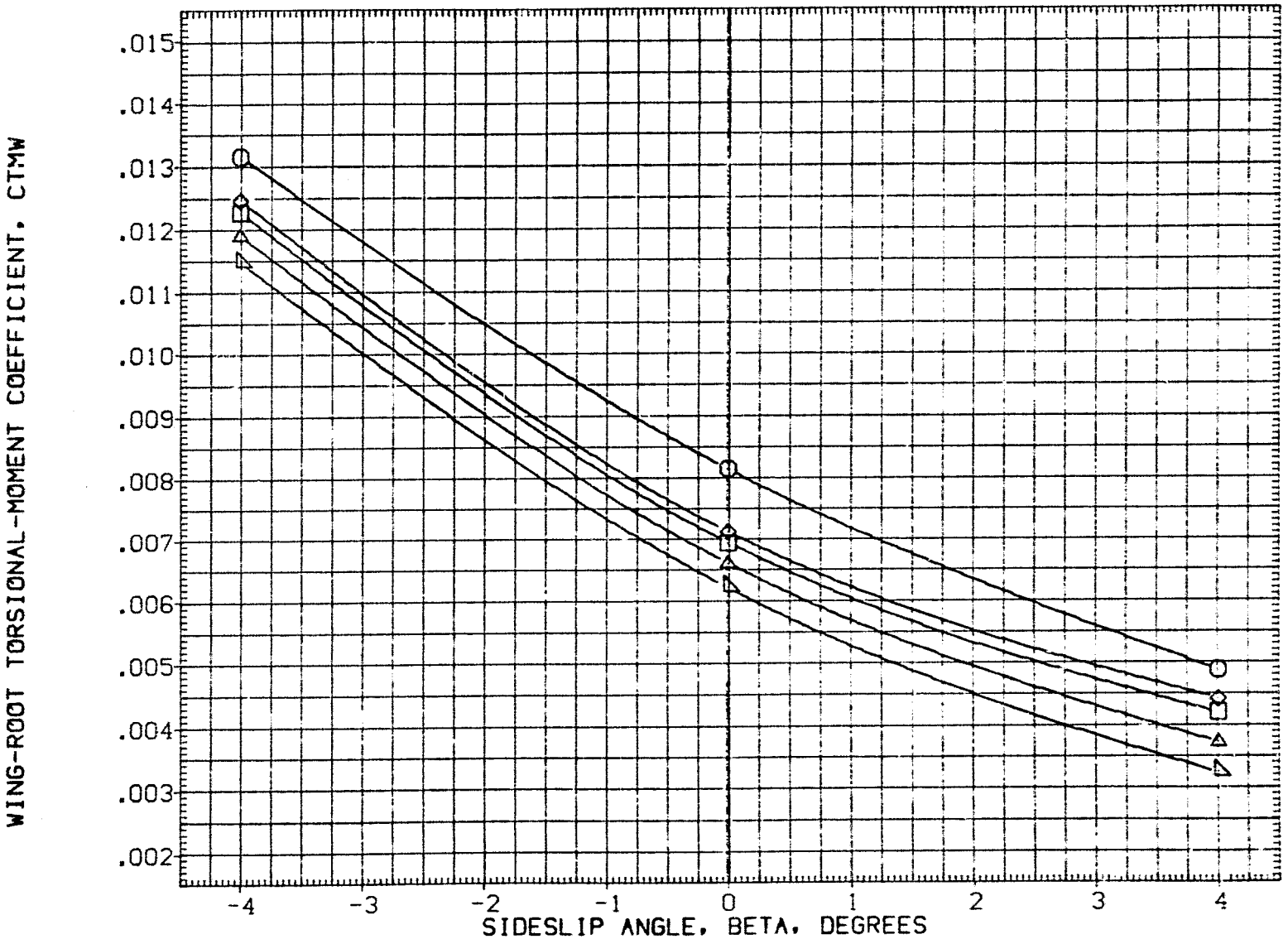



FIG. 67 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y26) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y09) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y04) | ▽ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

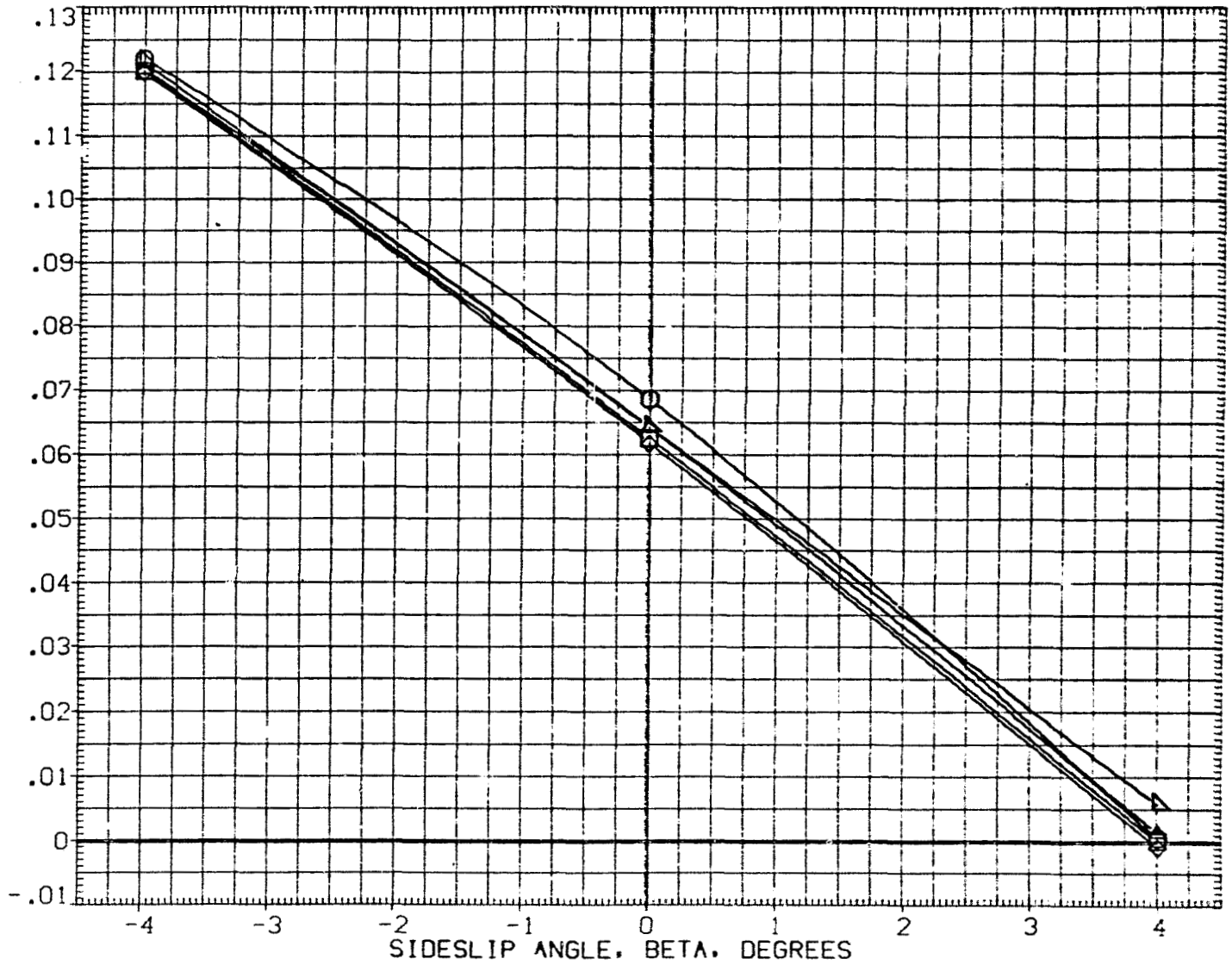



FIG. 67 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.25

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y32) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y27) | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y10) | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y05) | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

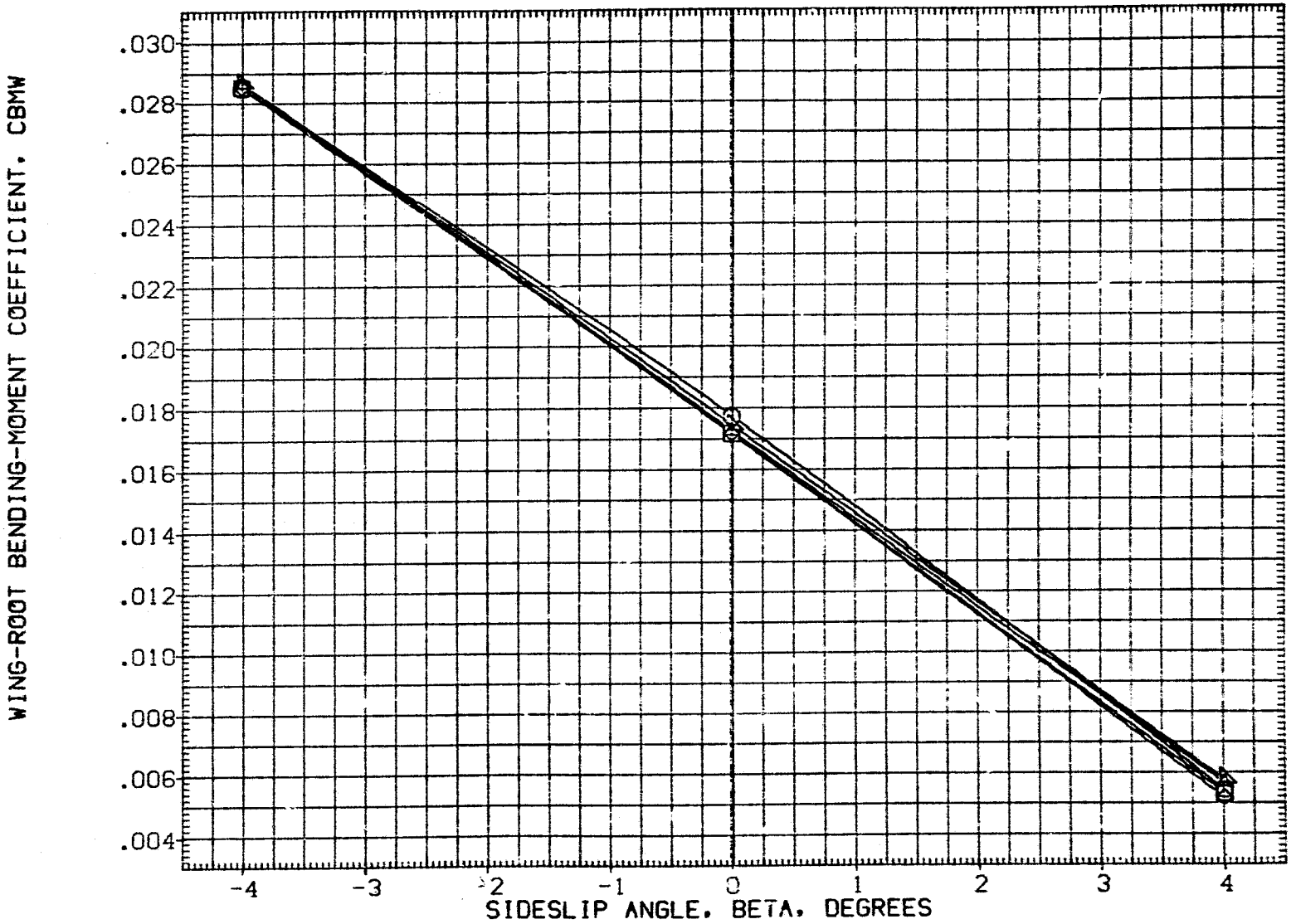



FIG. 68 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y27) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y10) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y05) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

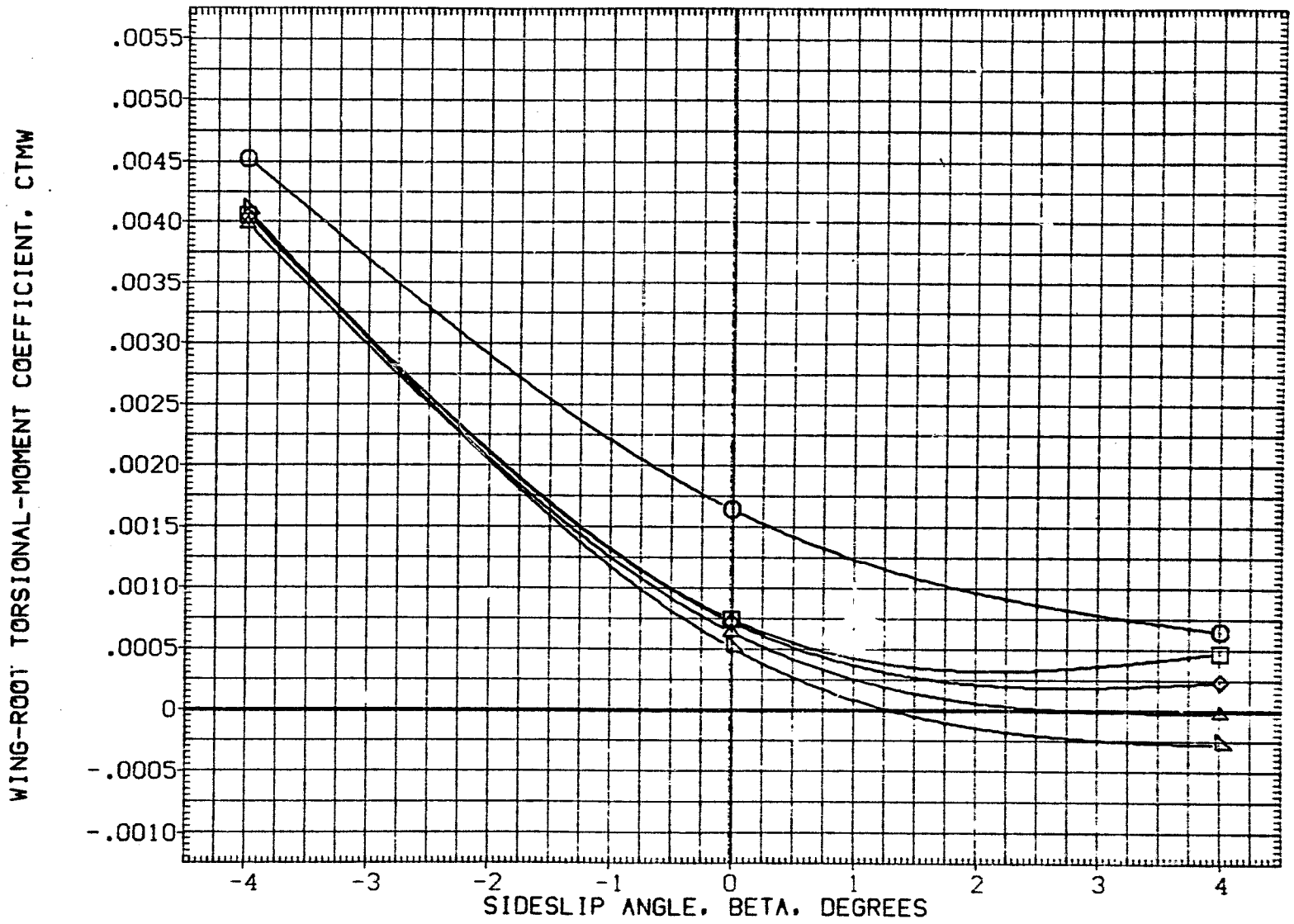



FIG. 68 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y27) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y10) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y05) | ▷ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0 | IN. |
| ZMRP | . | |
| SCALE | .. | |

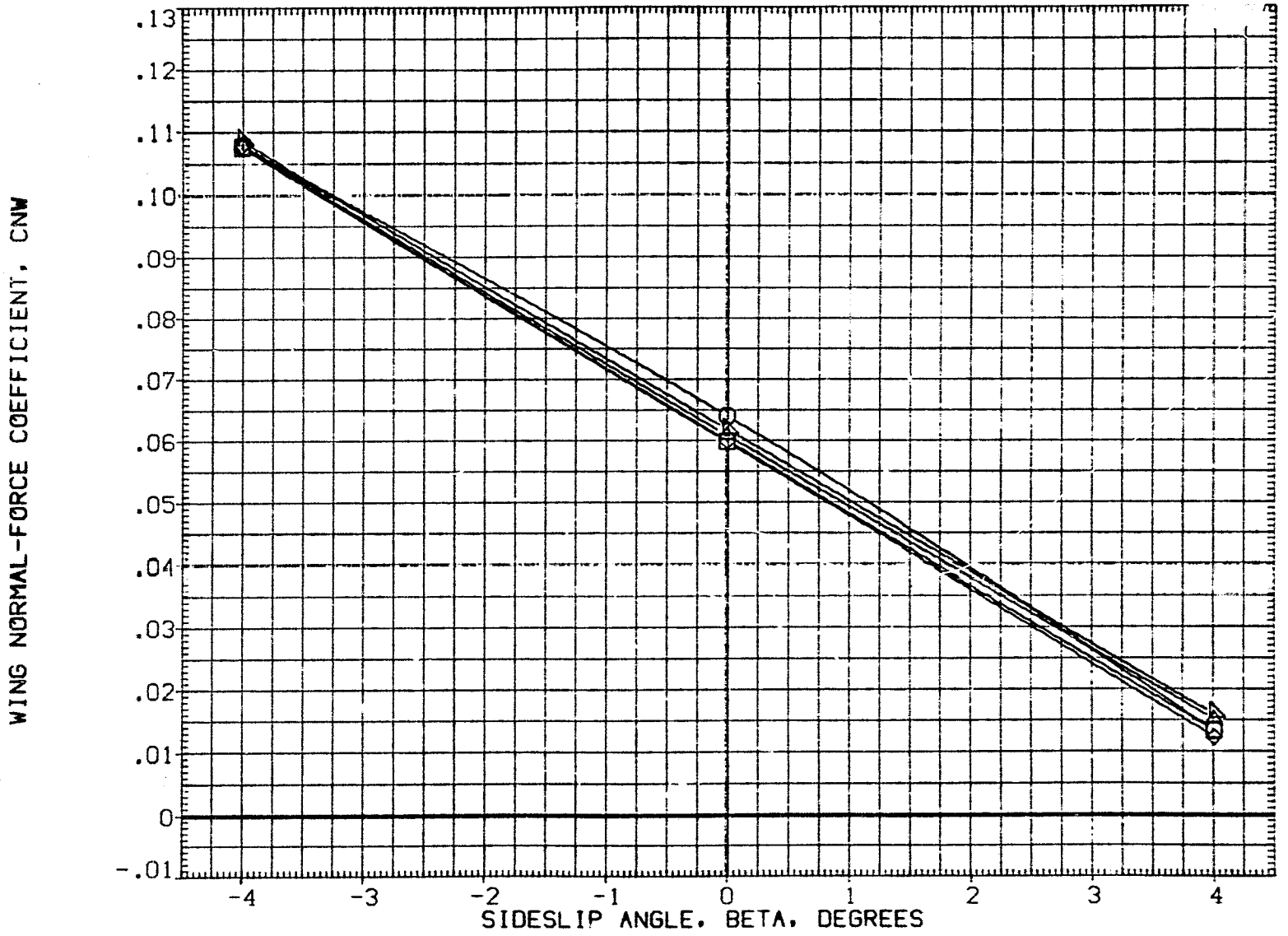



FIG. 68 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y06) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y01) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

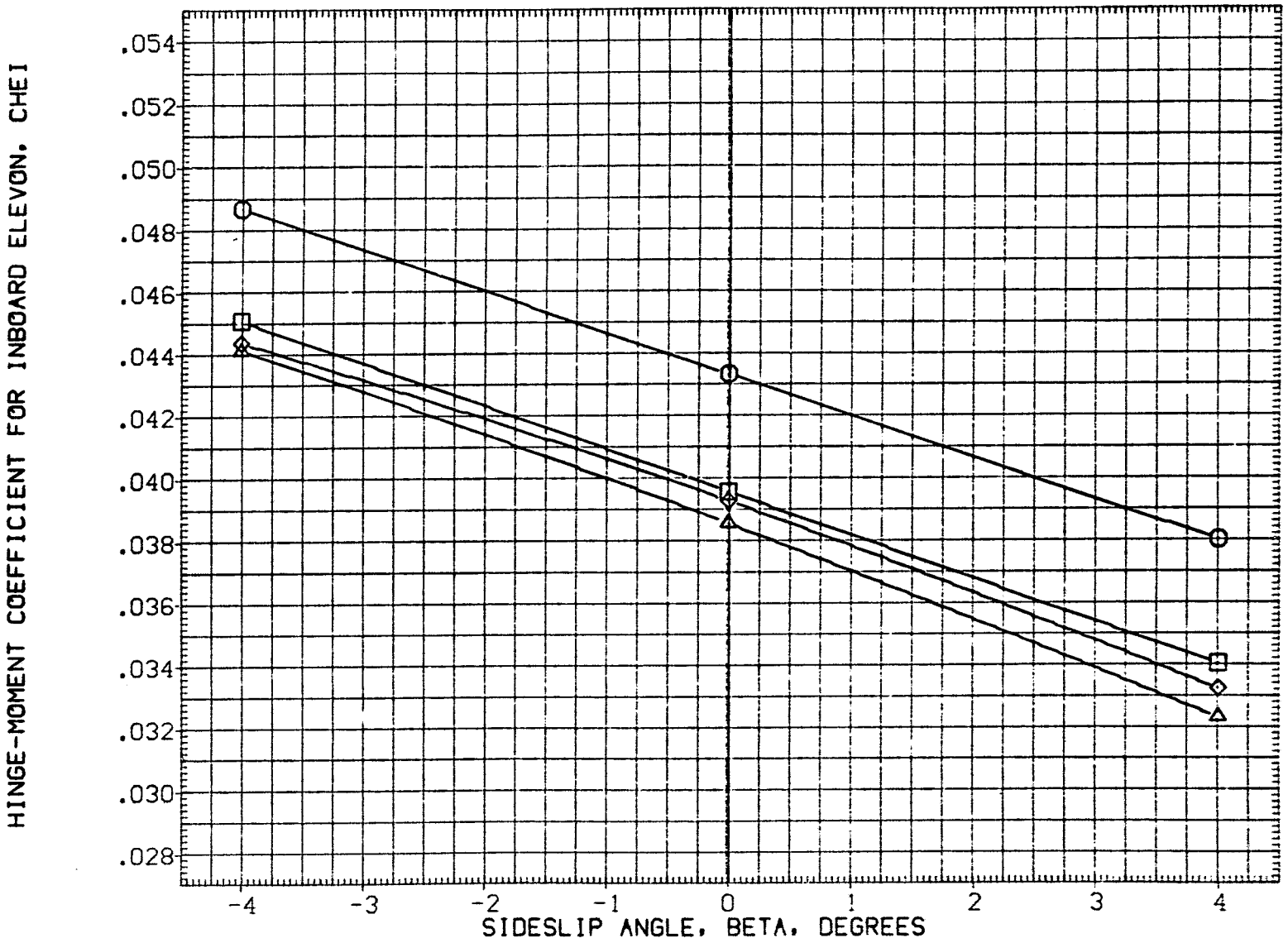



FIG. 69 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y06) | | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y01) | | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

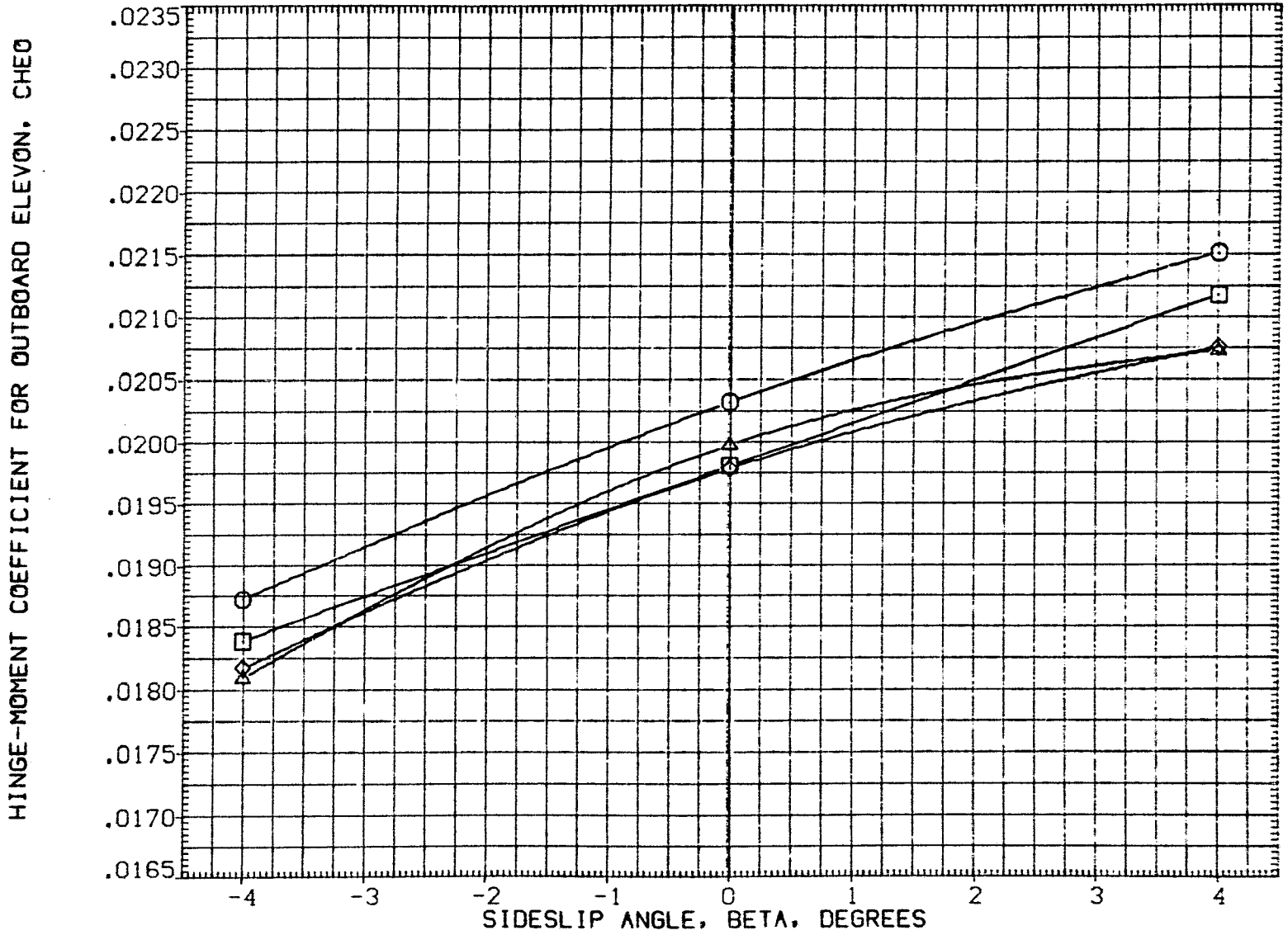



FIG. 69 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y07) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y02) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

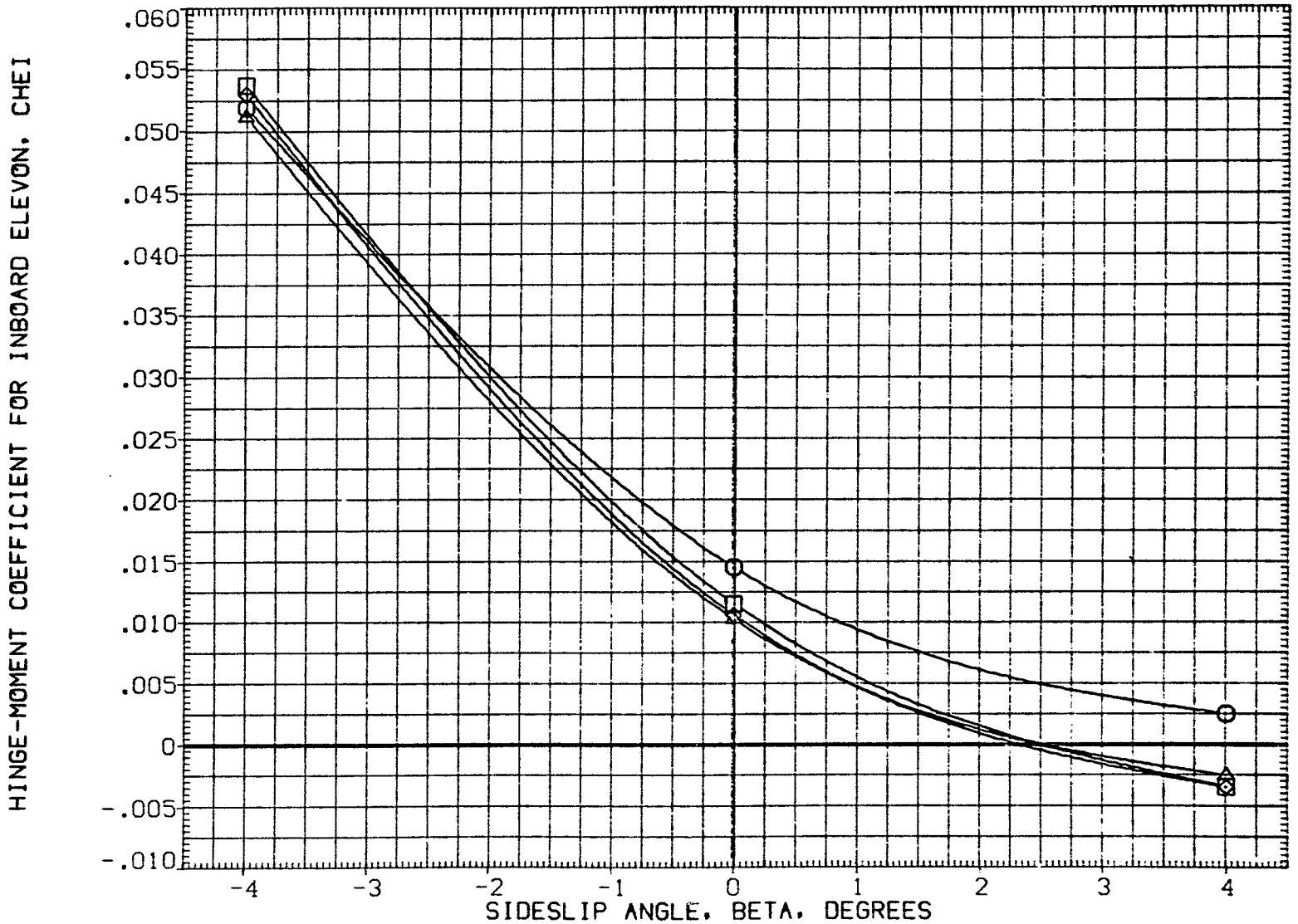



FIG. 70 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=0.9

(A)ALPHA = .00

| DATA | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y07) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y02) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

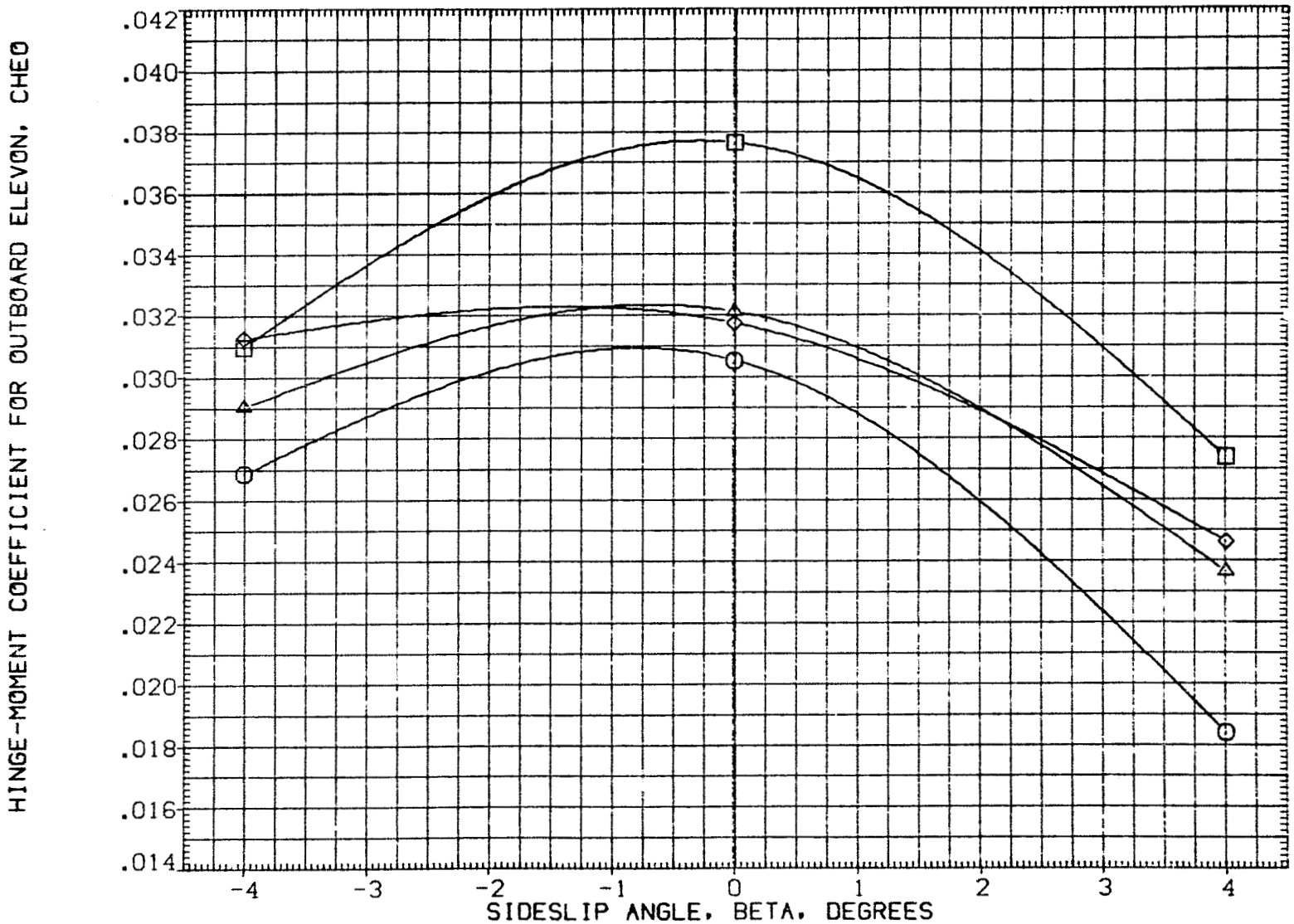



FIG. 70 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y25) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y08) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y03) | ▷ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

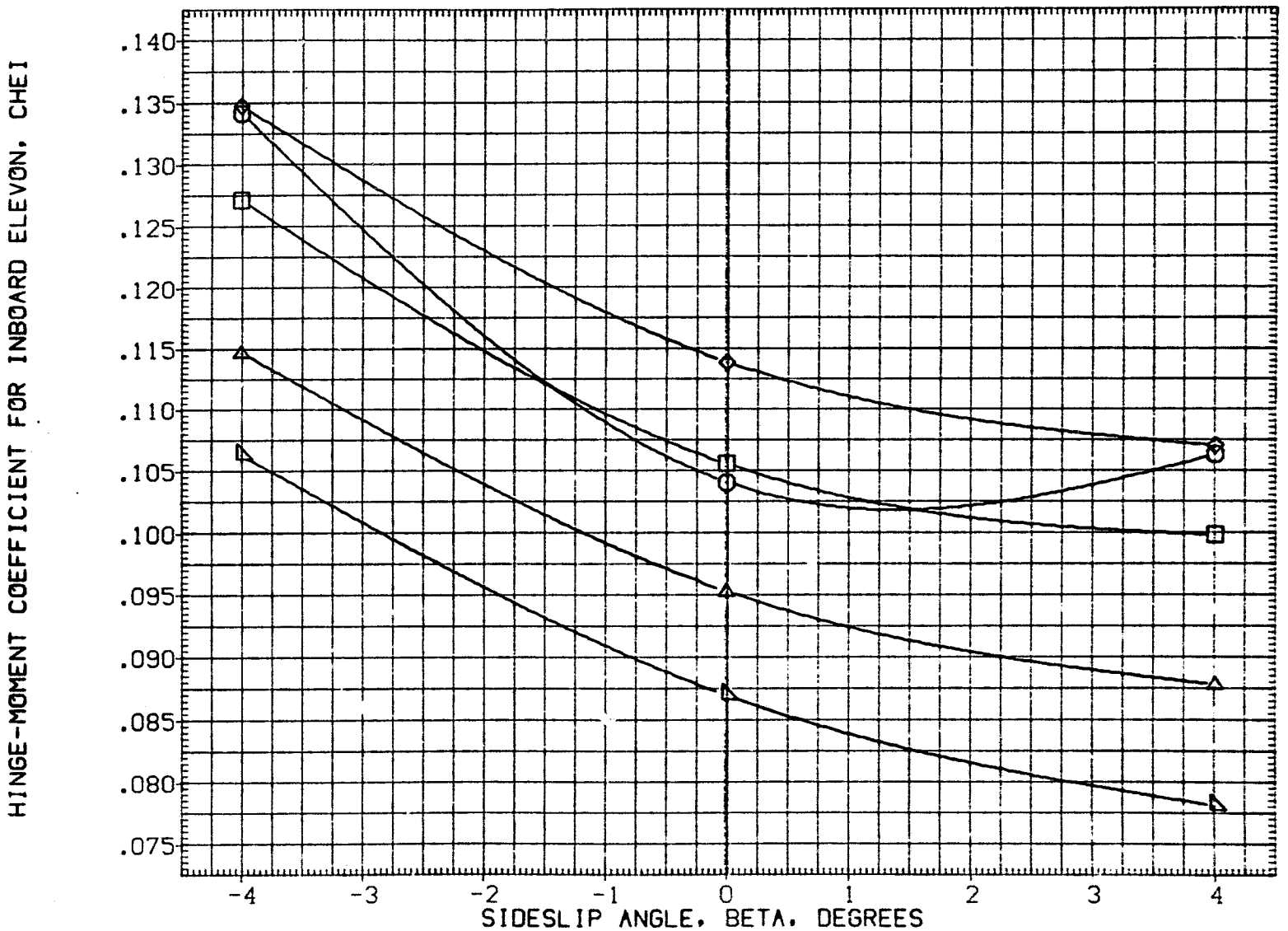



FIG. 71 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y25) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y08) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y03) | ▽ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

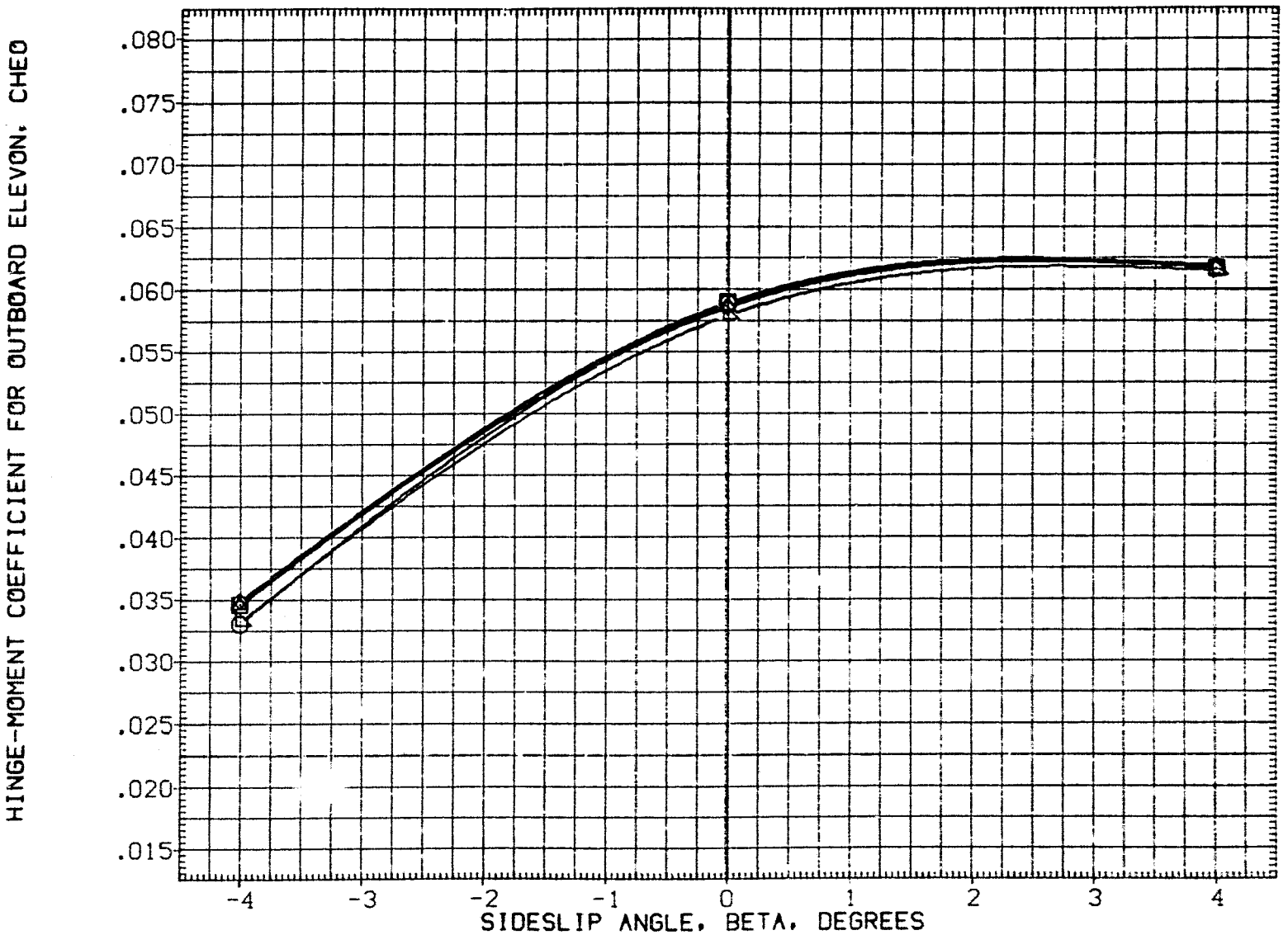



FIG. 71 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y26) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y09) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y04) | ▽ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

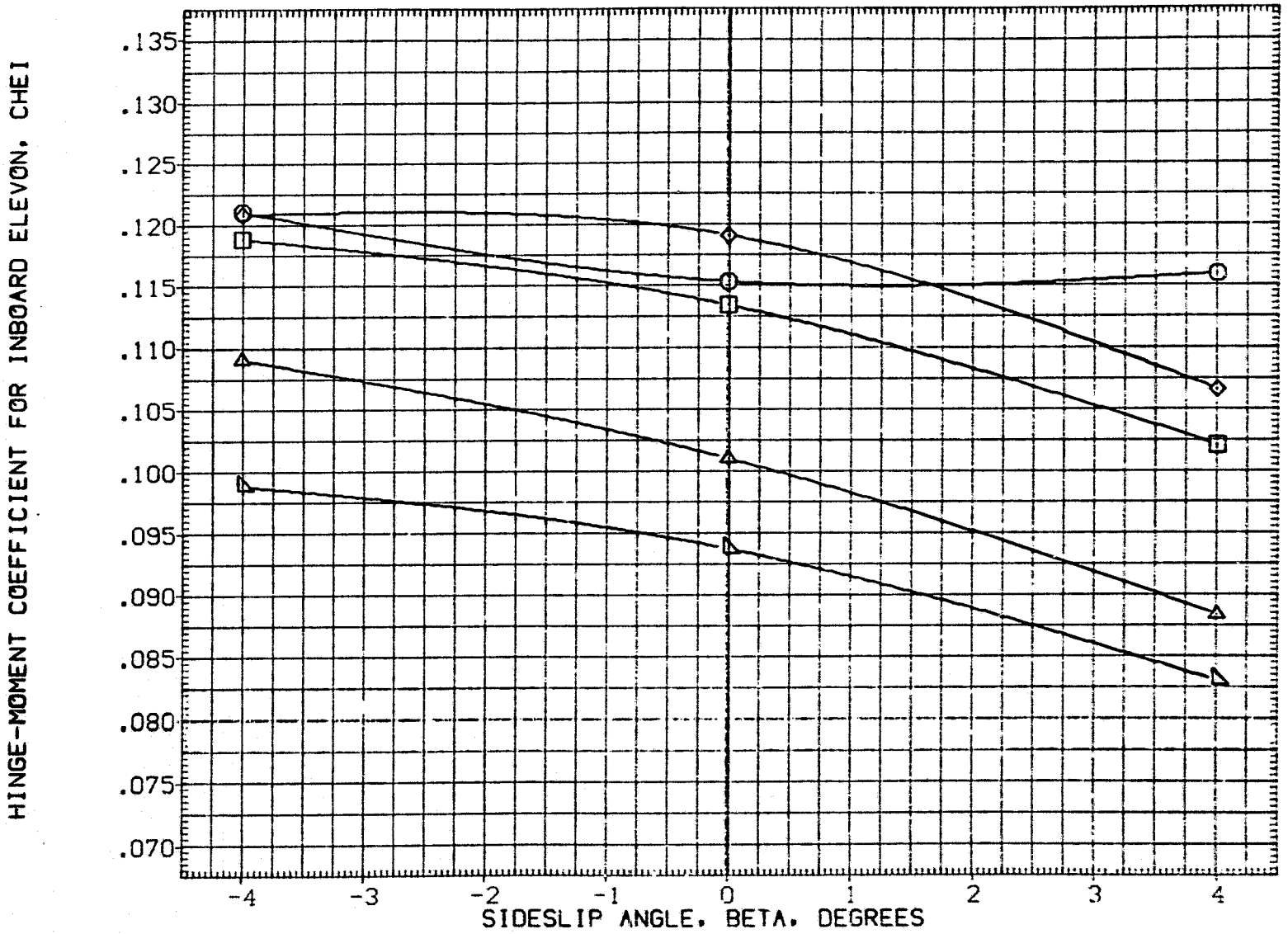



FIG. 72 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y26) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y09) | ◁ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y04) | ▷ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

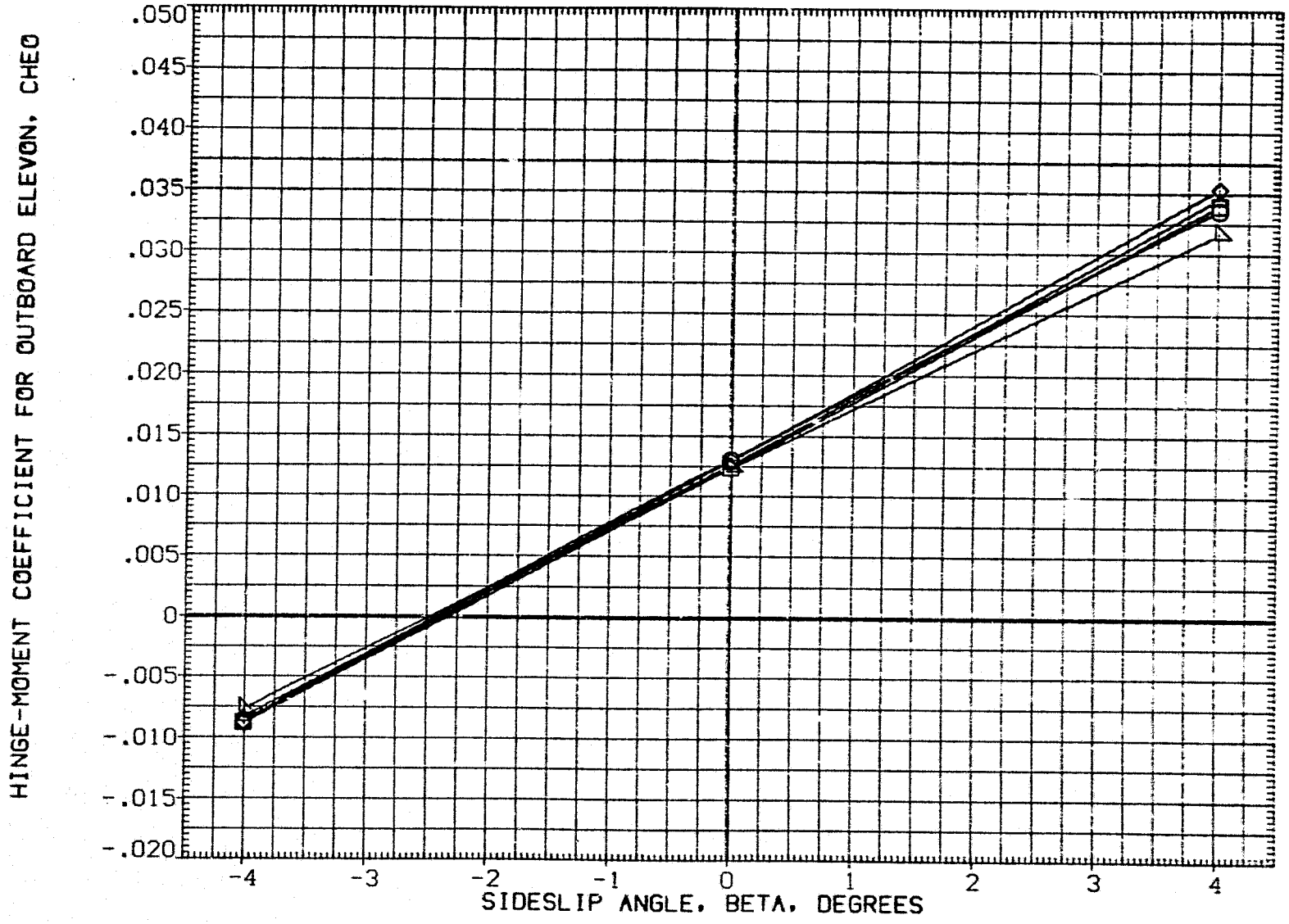



FIG. 72 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y27) | | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y10) | | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y05) | | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

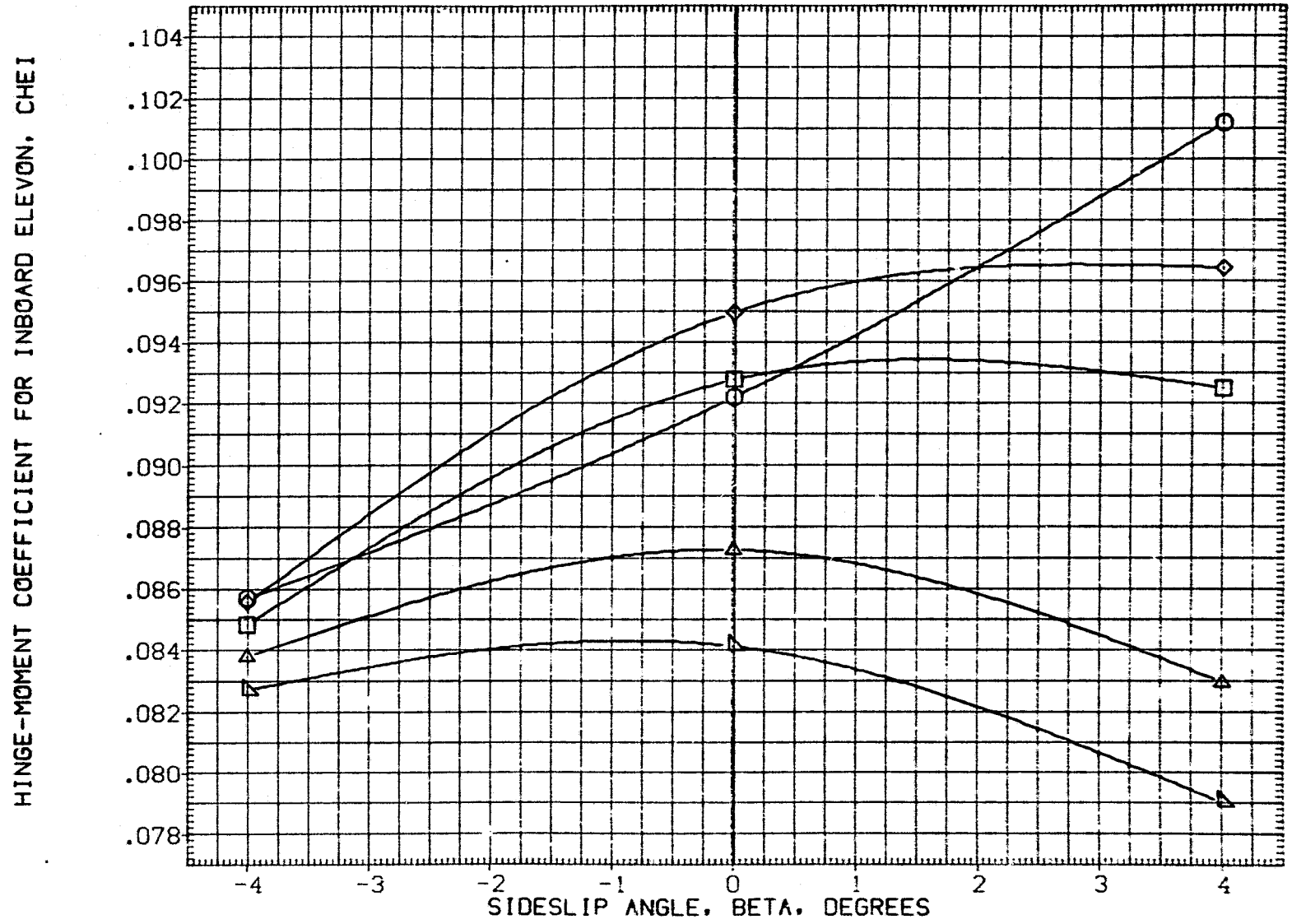



FIG. 73 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y27) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y10) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y05) | ▽ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

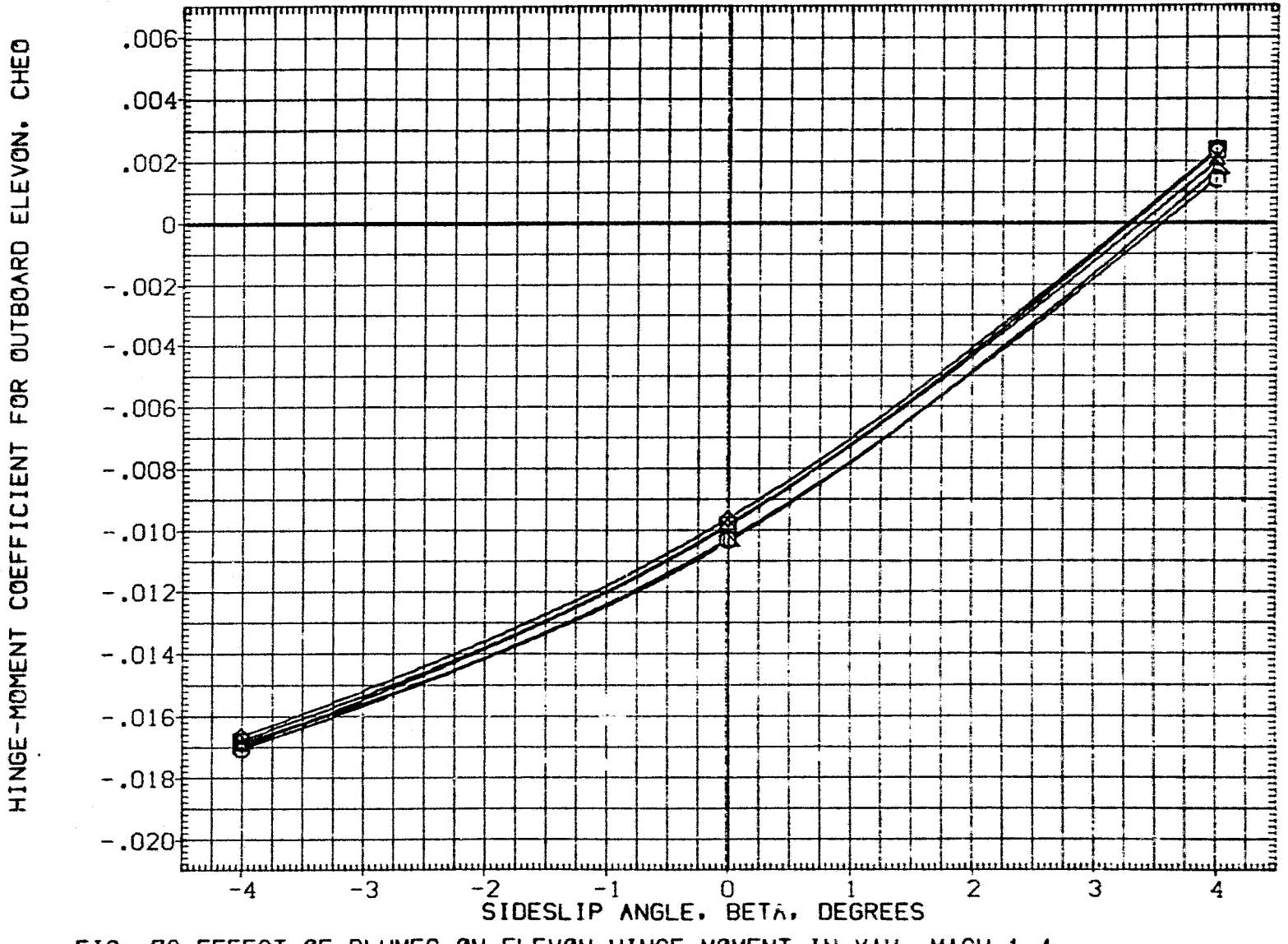



FIG. 73 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4XB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

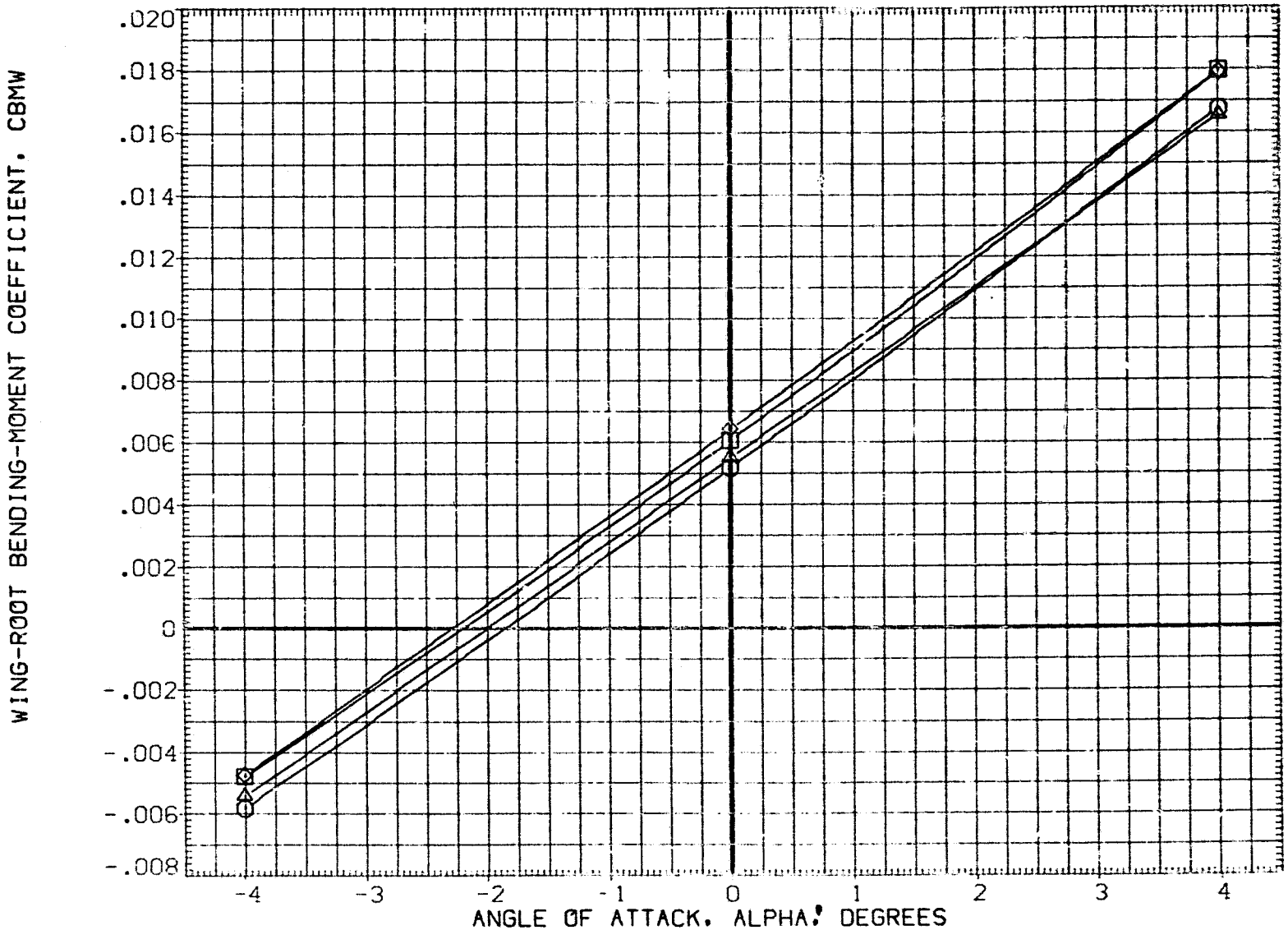



FIG. 74 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.6

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4XB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

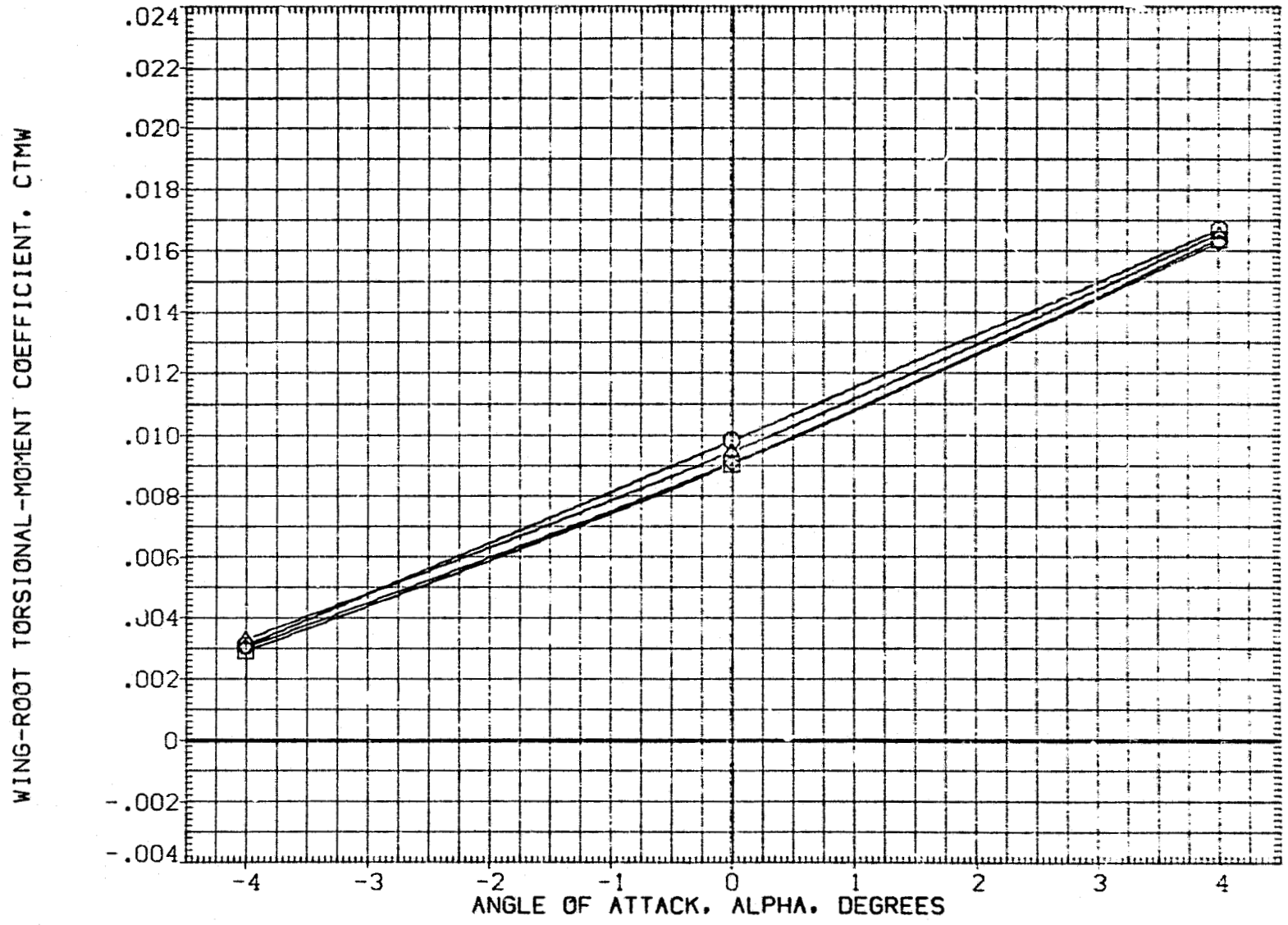



FIG. 74 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.6

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4XB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

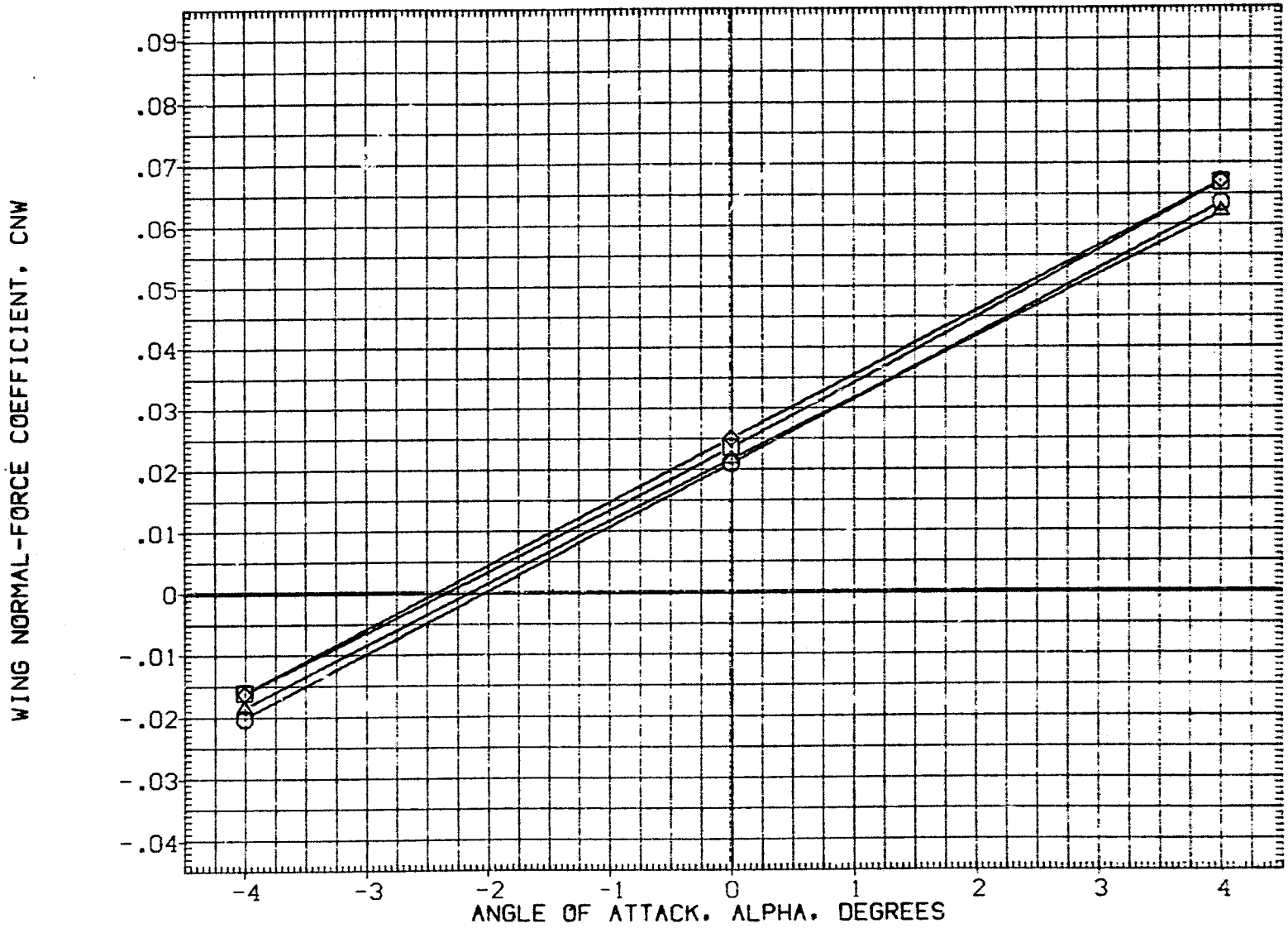



FIG. 74 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.6

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4X12) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4XB6) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

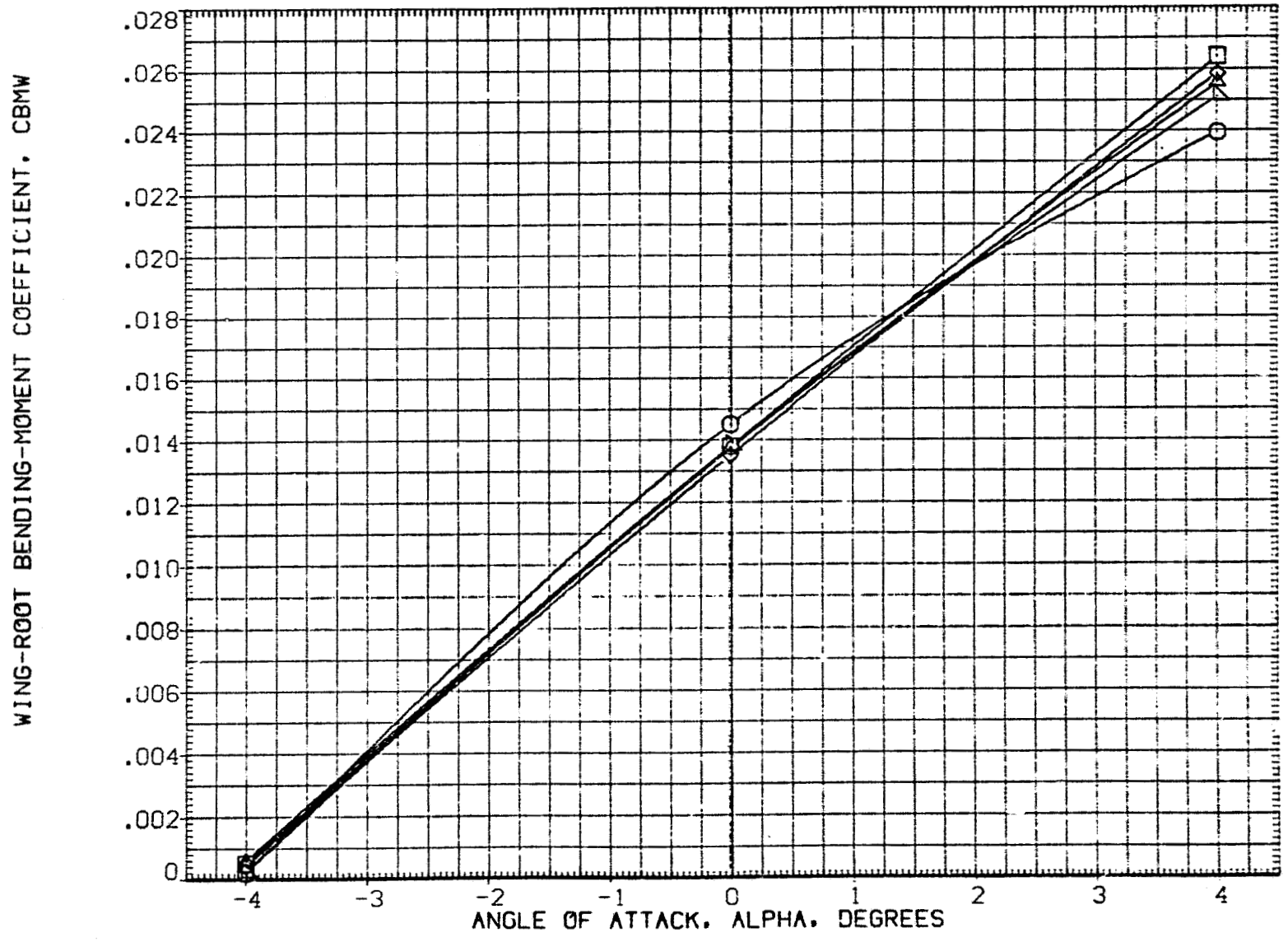



FIG. 75 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.9

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4X12) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4XB6) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

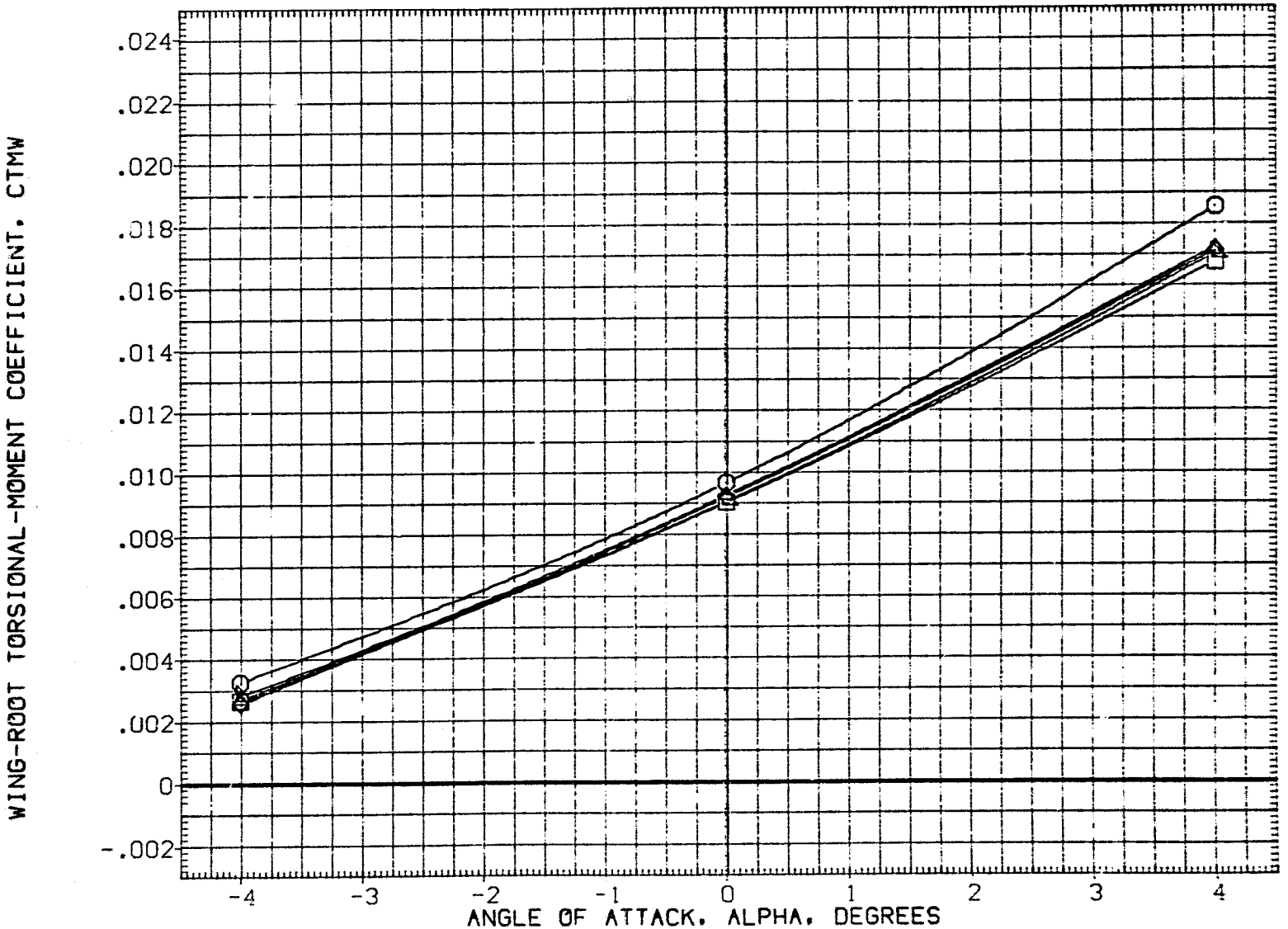



FIG. 75 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.9

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X1G) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4X12) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4XB6) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

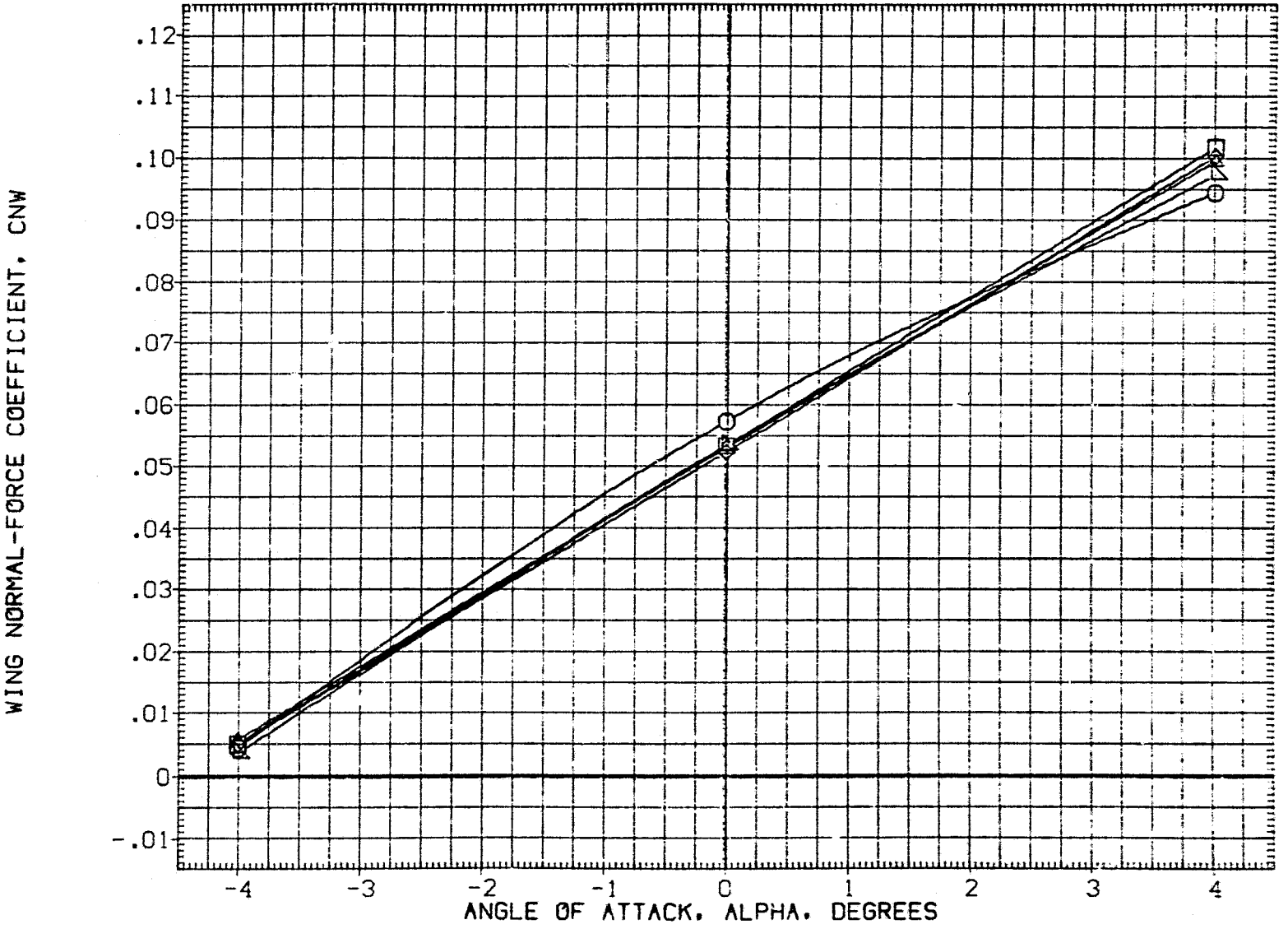



FIG. 75 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.9

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X22) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X17) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X13) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XB7) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

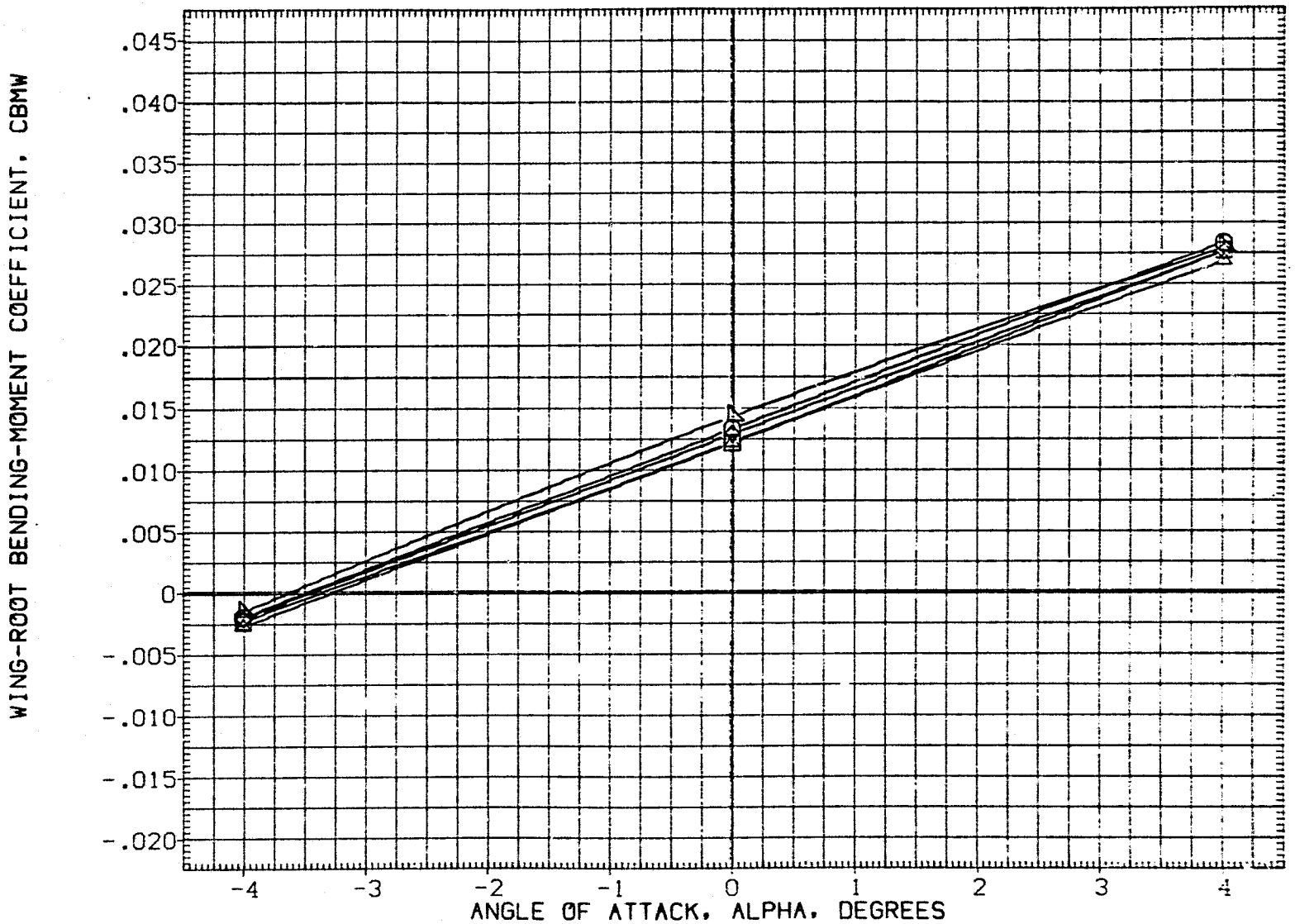



FIG. 76 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.1

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X22) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X17) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X13) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XB7) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

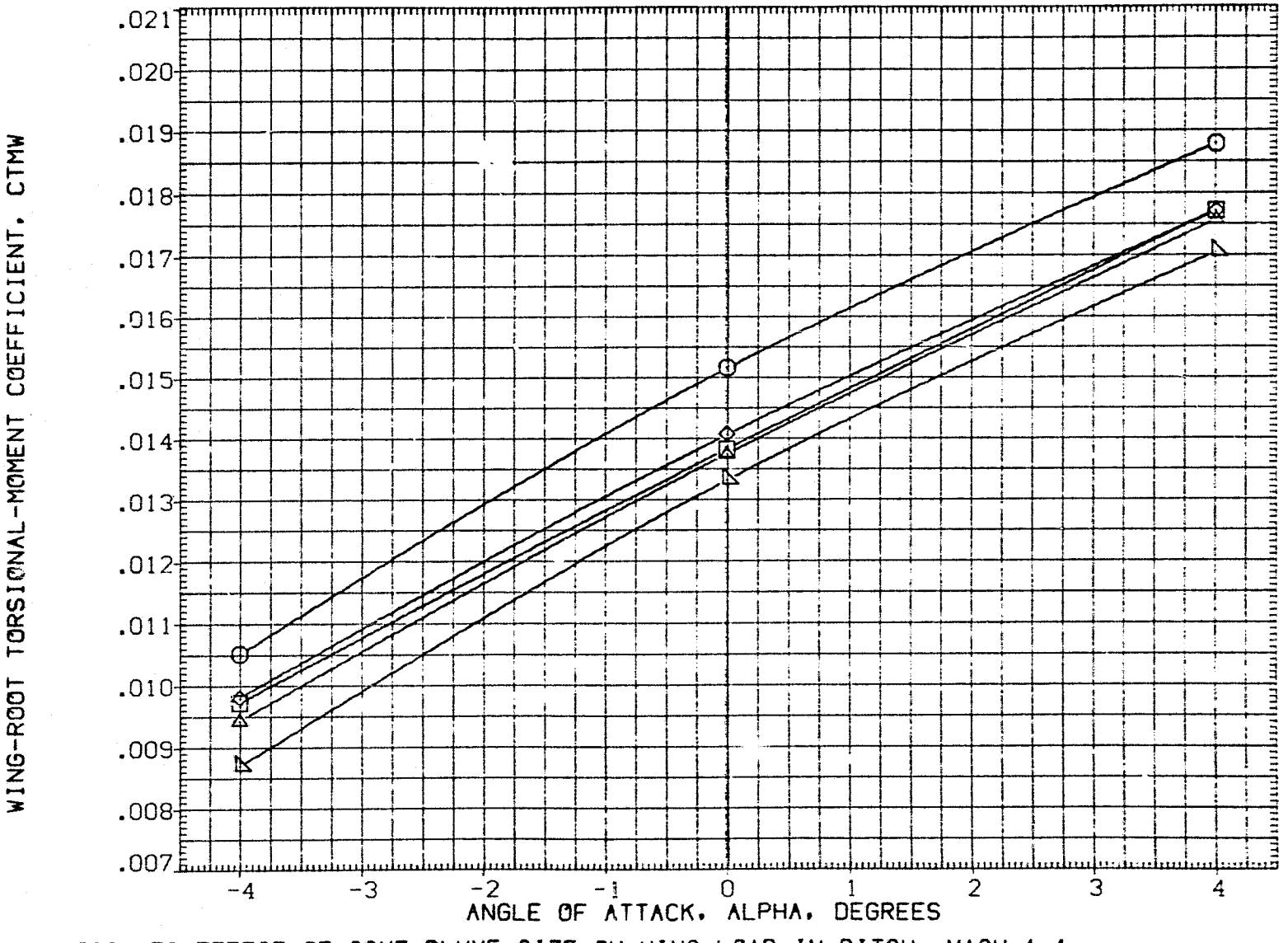



FIG. 76 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.1

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X17) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X13) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XB7) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

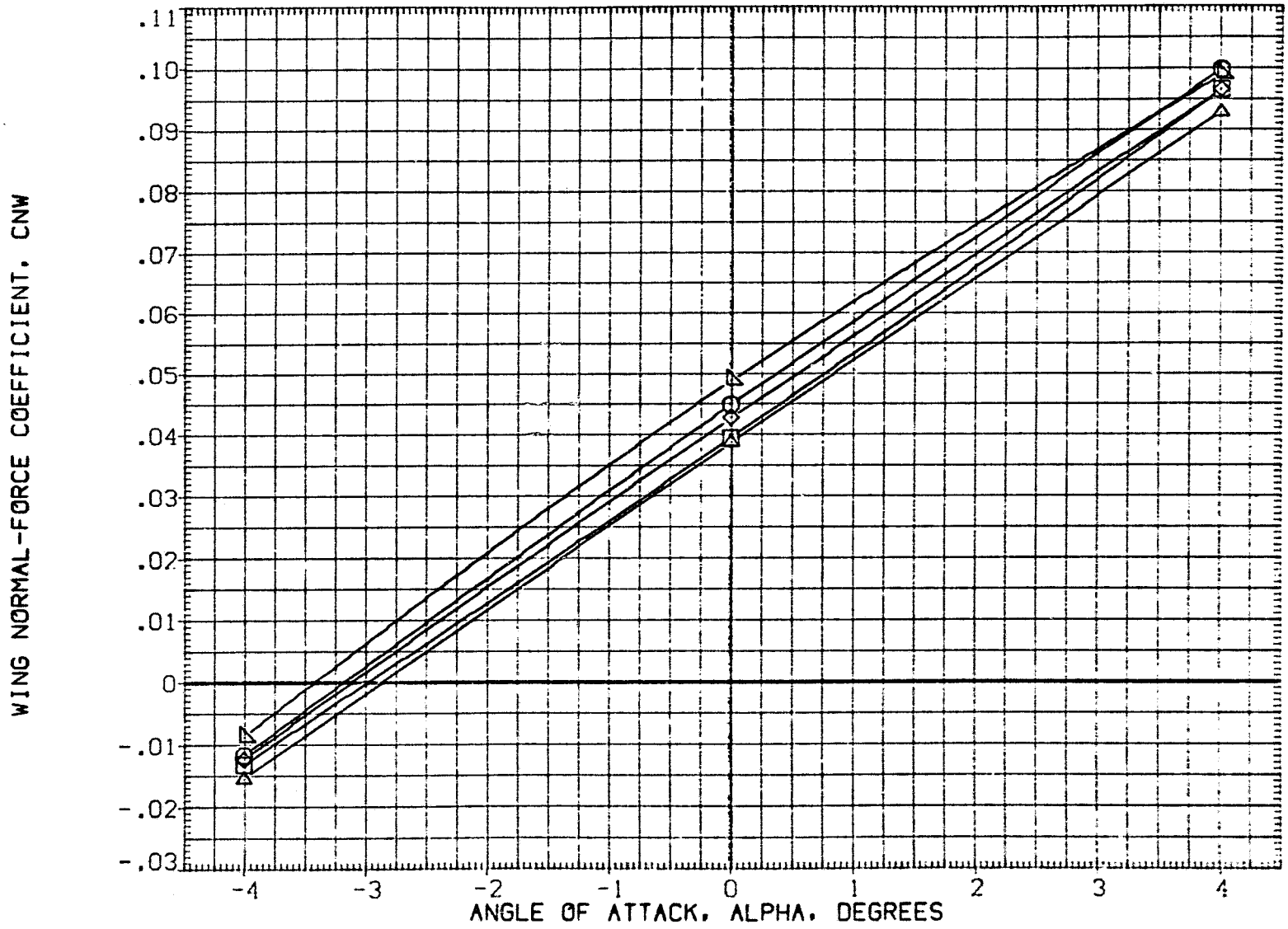



FIG. 76 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.1

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X18) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X14) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XB8) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

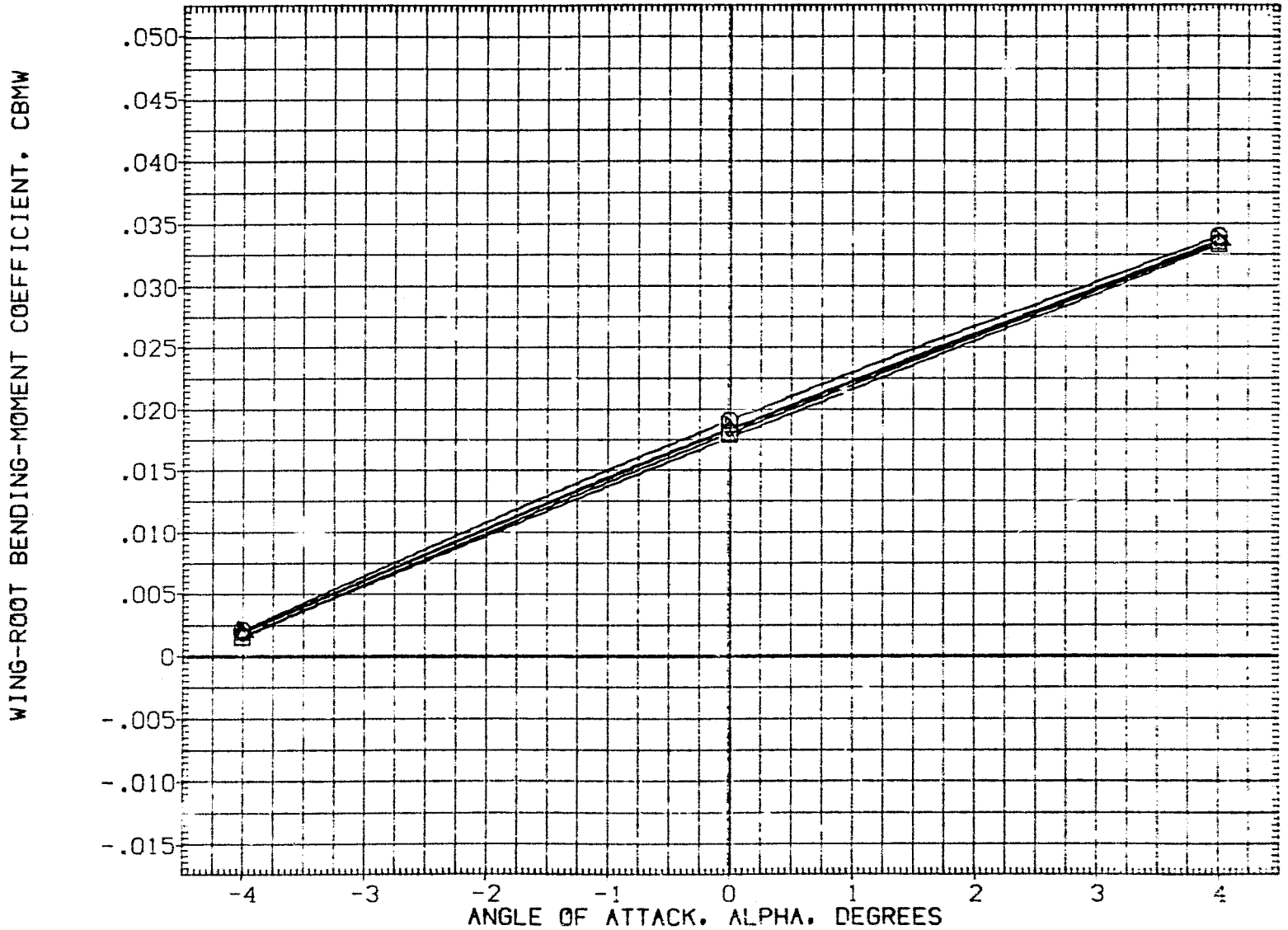



FIG. 77 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.25

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X18) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X14) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XB8) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

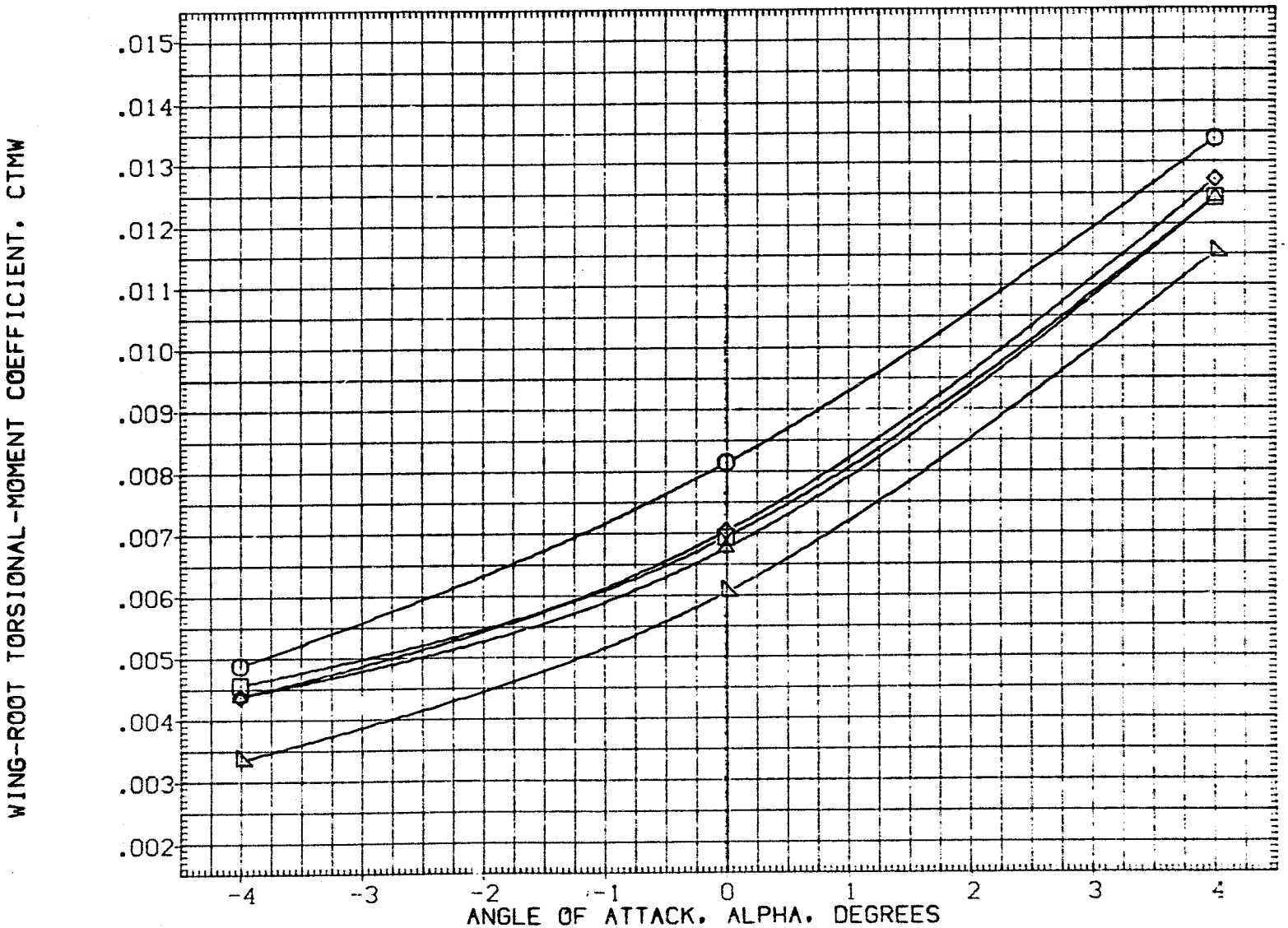



FIG. 77 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.25

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X18) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X14) | ◺ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X88) | ◺ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

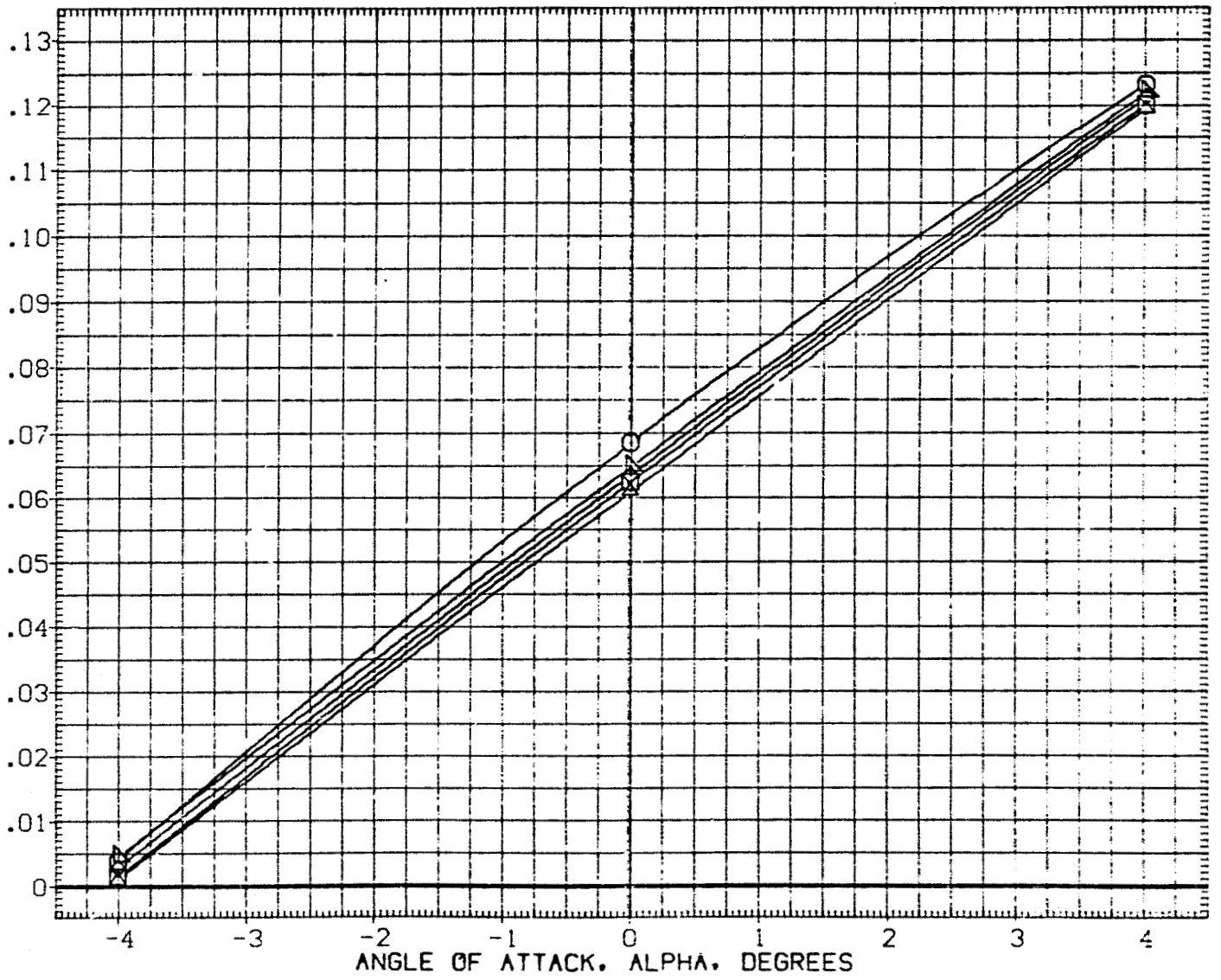



FIG. 77 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.25

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X24) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X19) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X15) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XB9) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

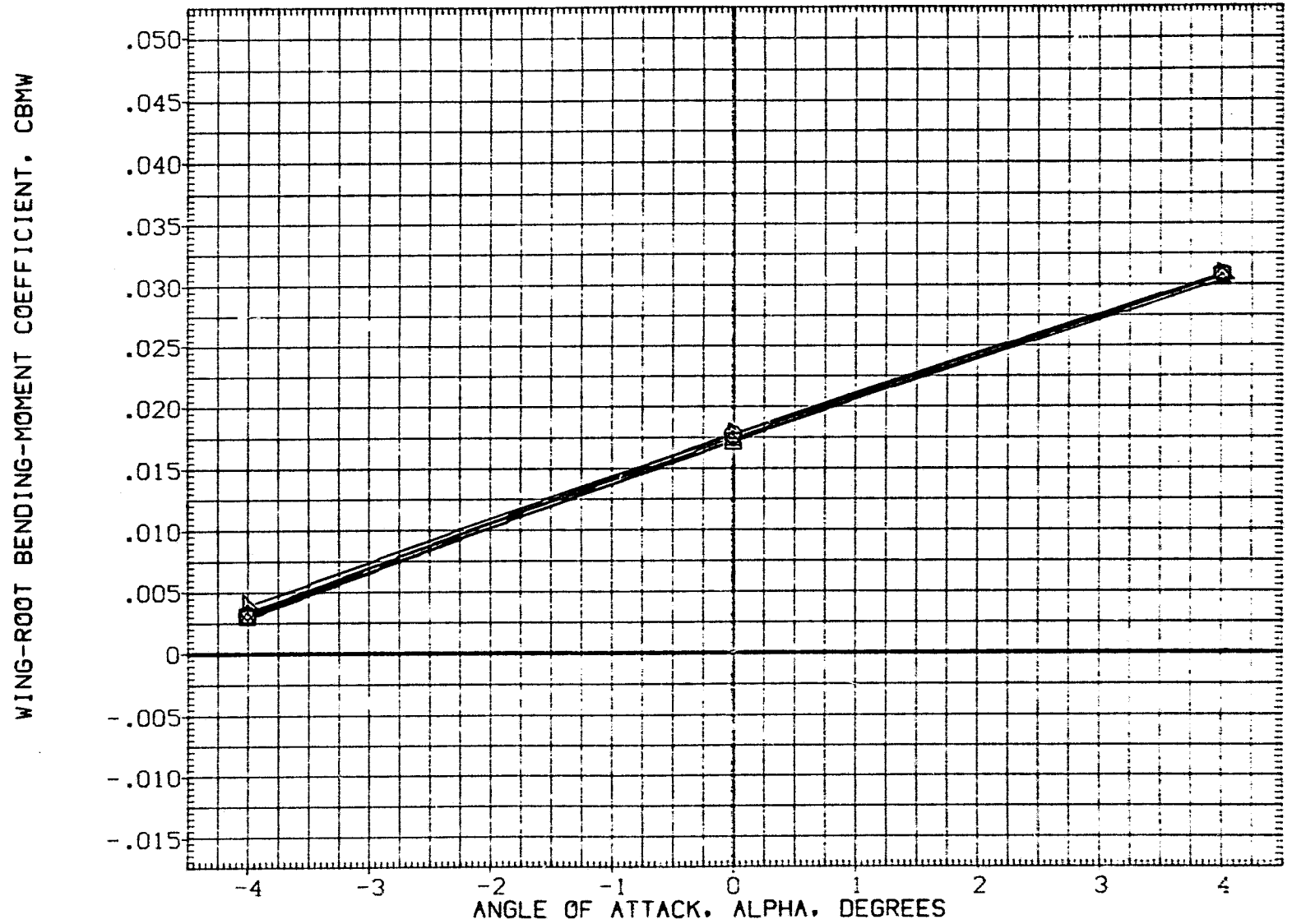



FIG. 78 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.4

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X32) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X24) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X19) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X15) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X89) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

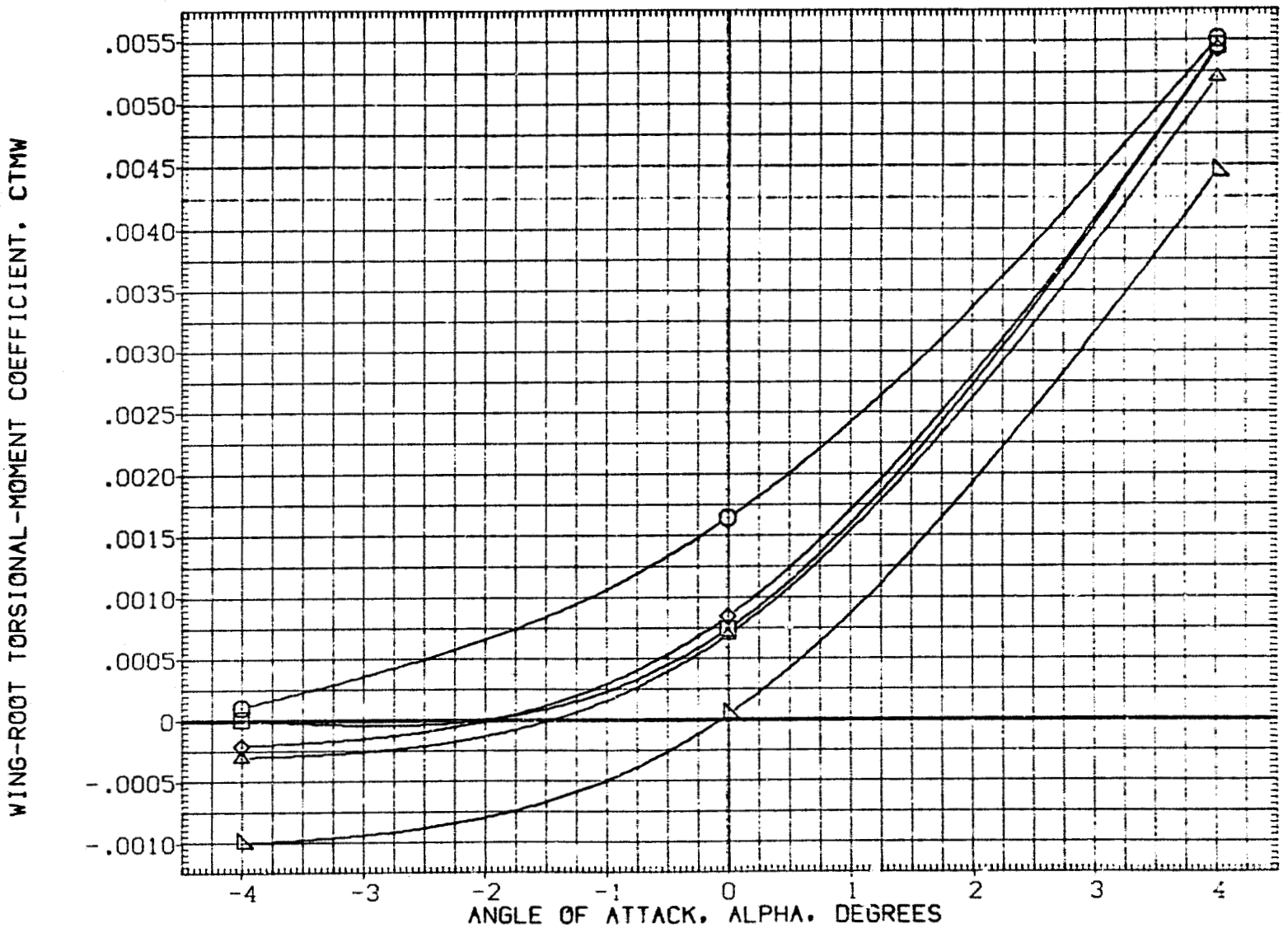



FIG. 78 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.4

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X19) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X15) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X89) | ◺ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

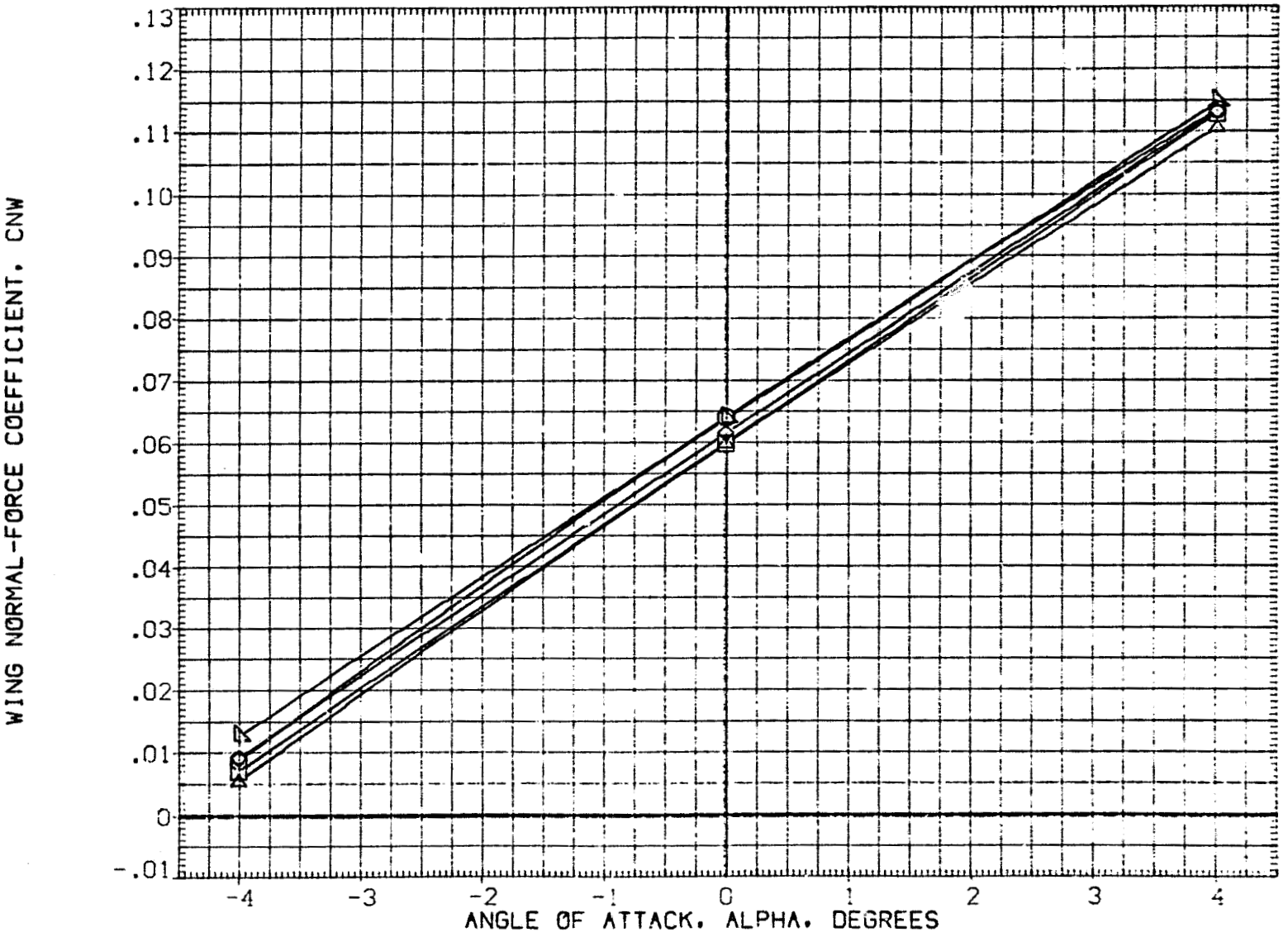



FIG. 78 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.4

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (OSS OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4YB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

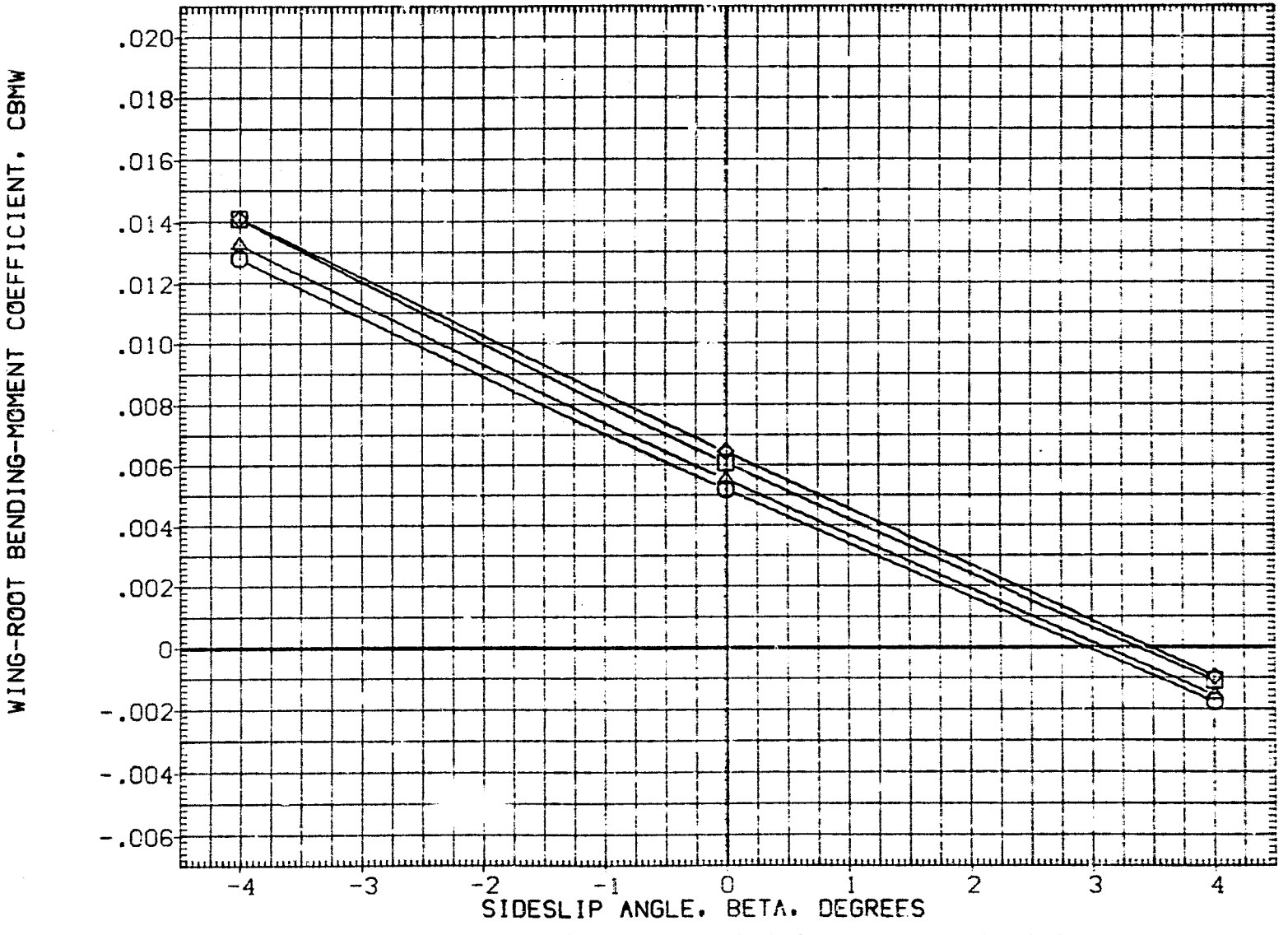



FIG. 79 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW. MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SPB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4YB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

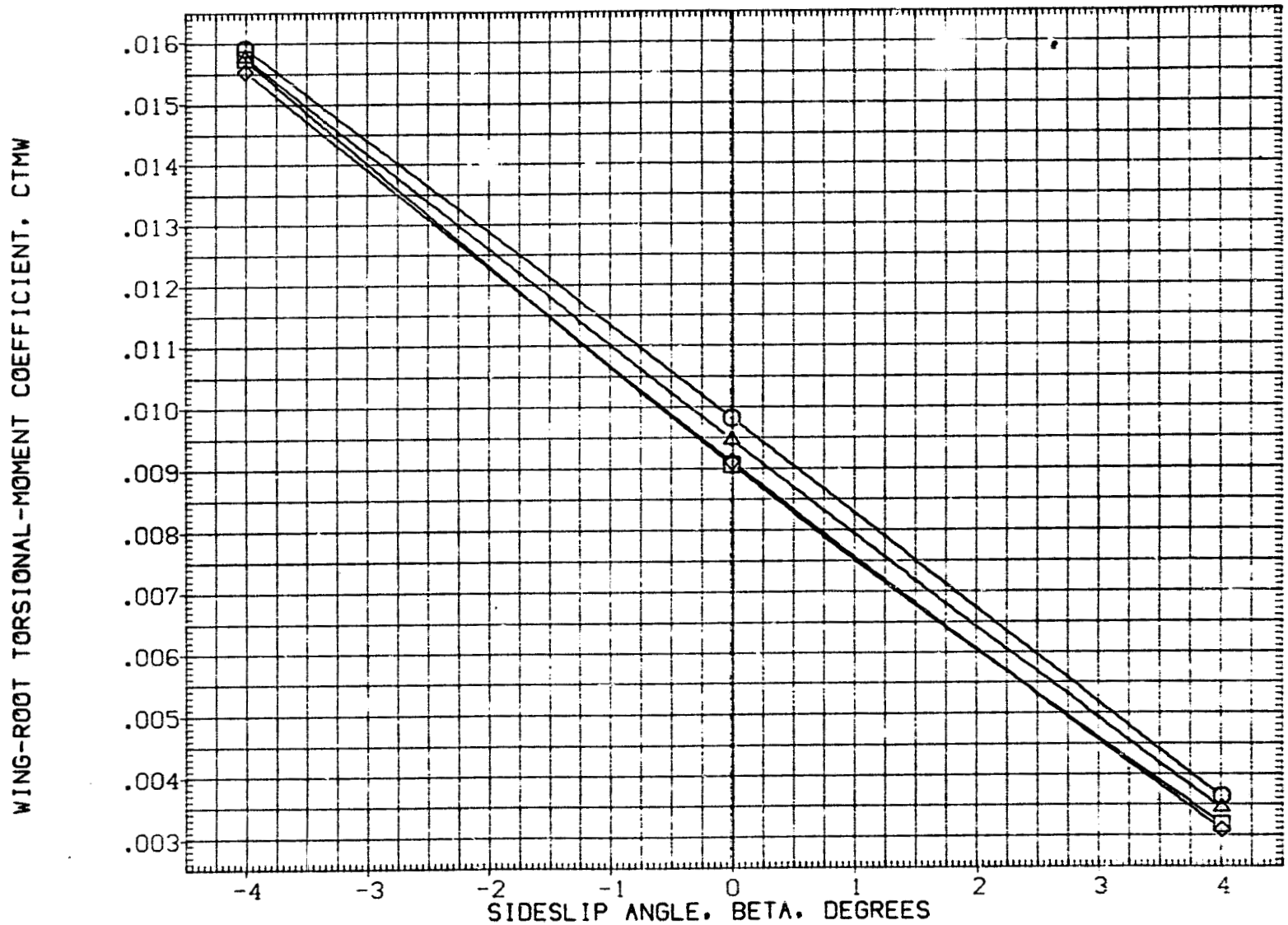



FIG. 79 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA8[illegible] | (SRB OFF) | (SSME OFF) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA[illegible] | (SRB NOM) | (SSME NOM) | .000 | .000 | .600 | 3.400 |
| (RE4Y11) | ◇ | ARC 11-023 IA[illegible] | (SRB NOM) | (SSME NOM+) | .000 | .000 | .600 | 3.400 |
| (RE4YB5) | △ | ARC 11-023 IA80[illegible] | (SRB NOM) | (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

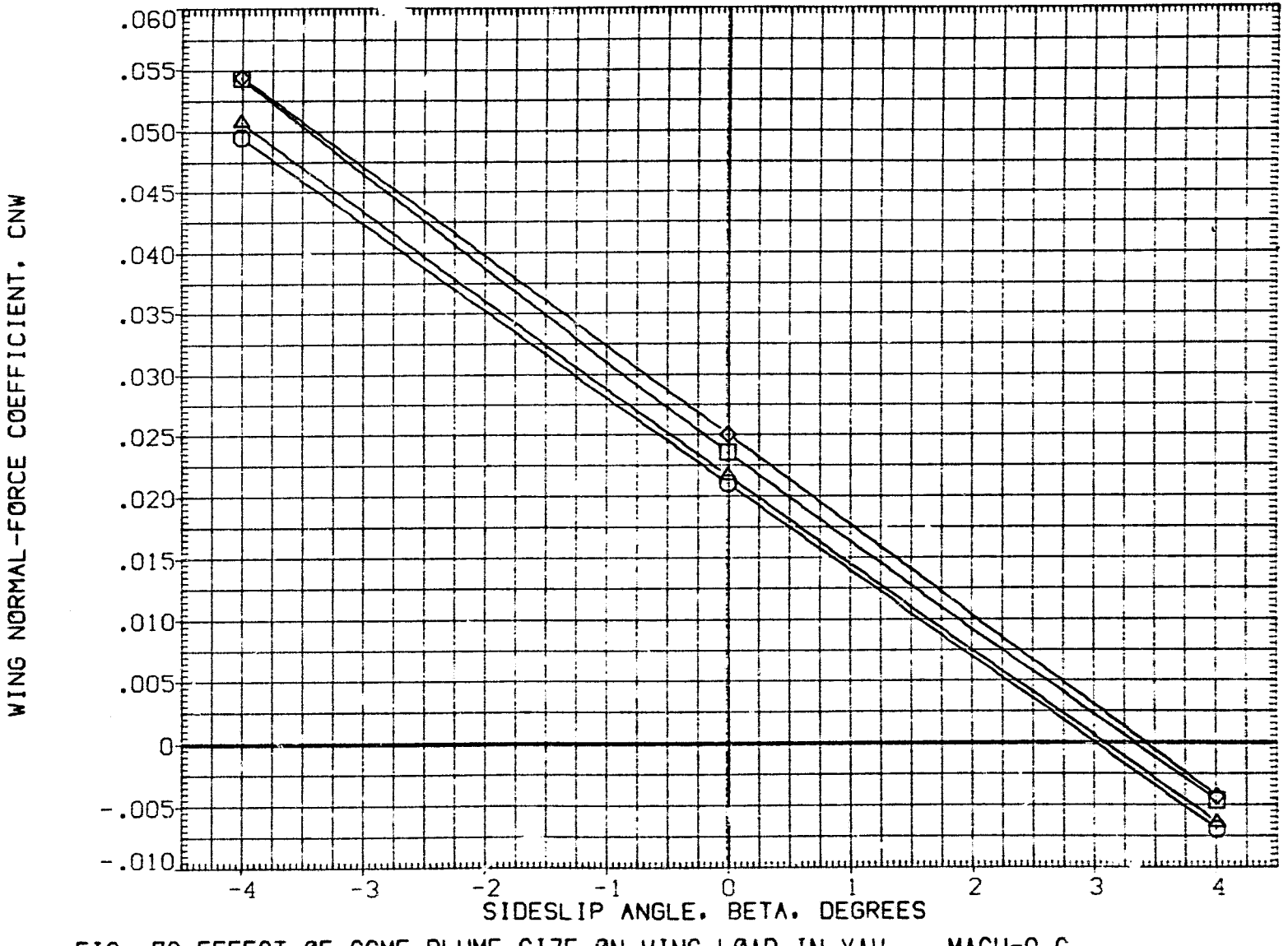



FIG. 79 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4Y12) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4YB6) | ◺ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

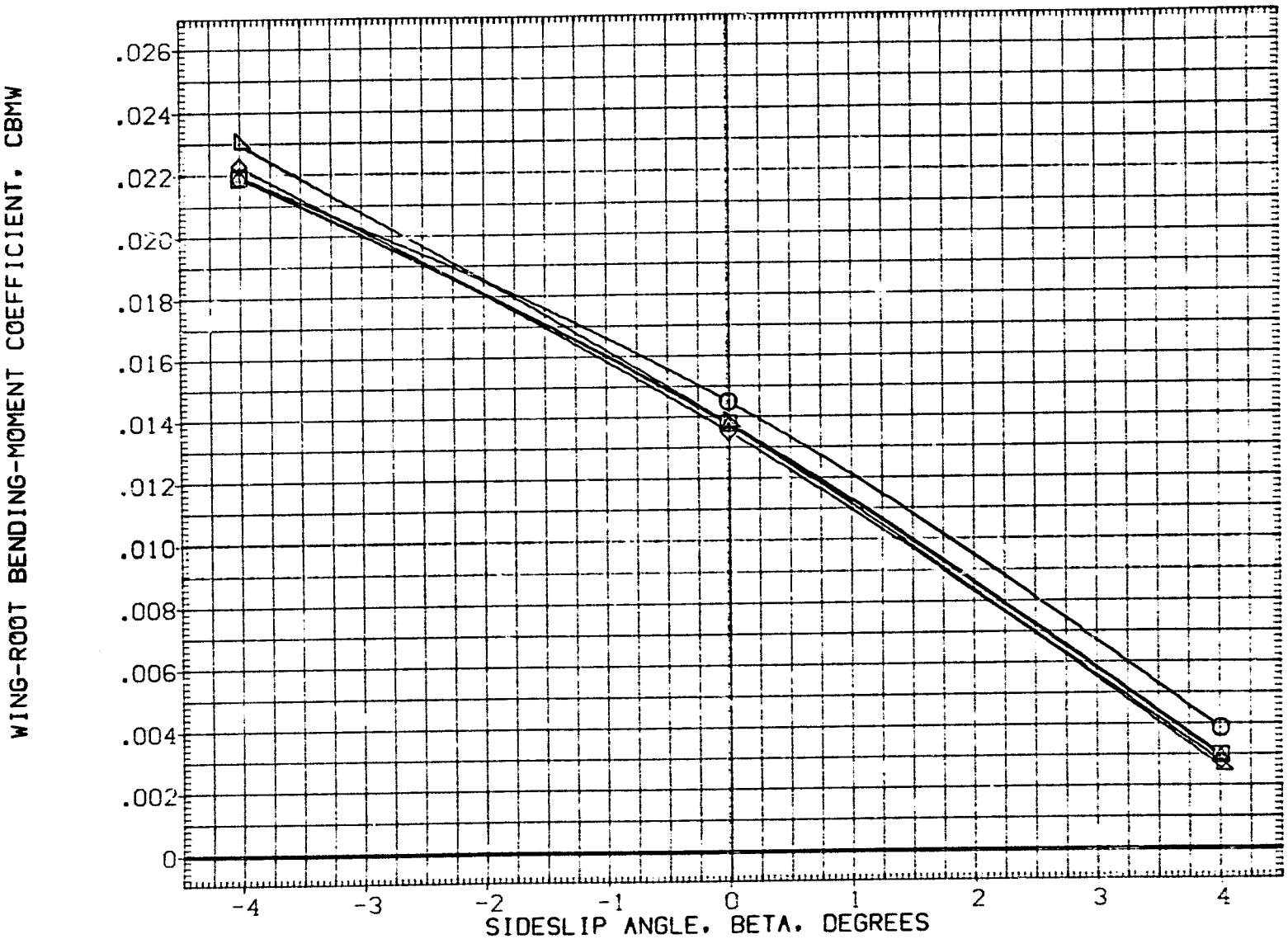



FIG. 80 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4Y12) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4YB6) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

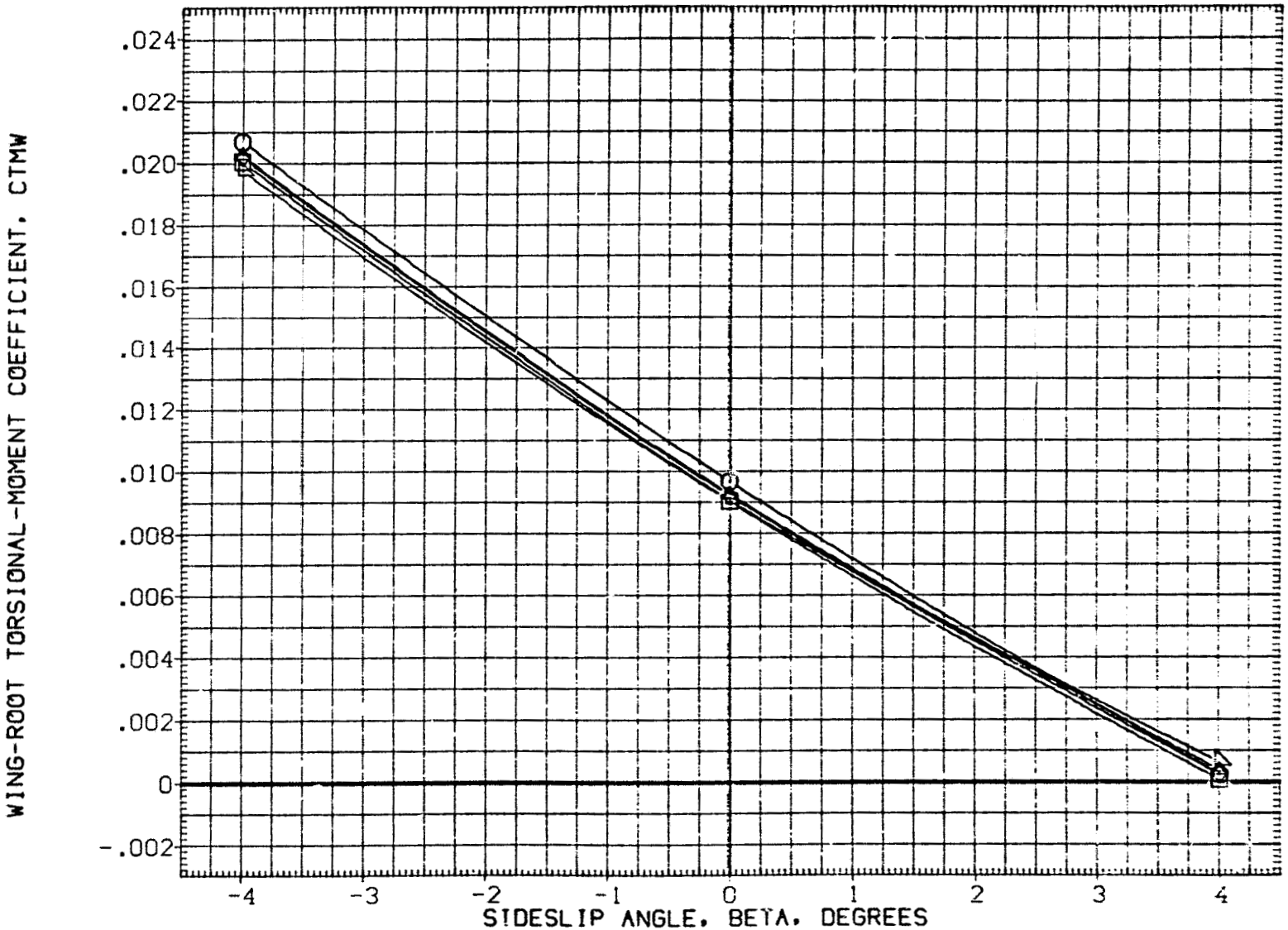



FIG. 80 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4Y12) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4YB6) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

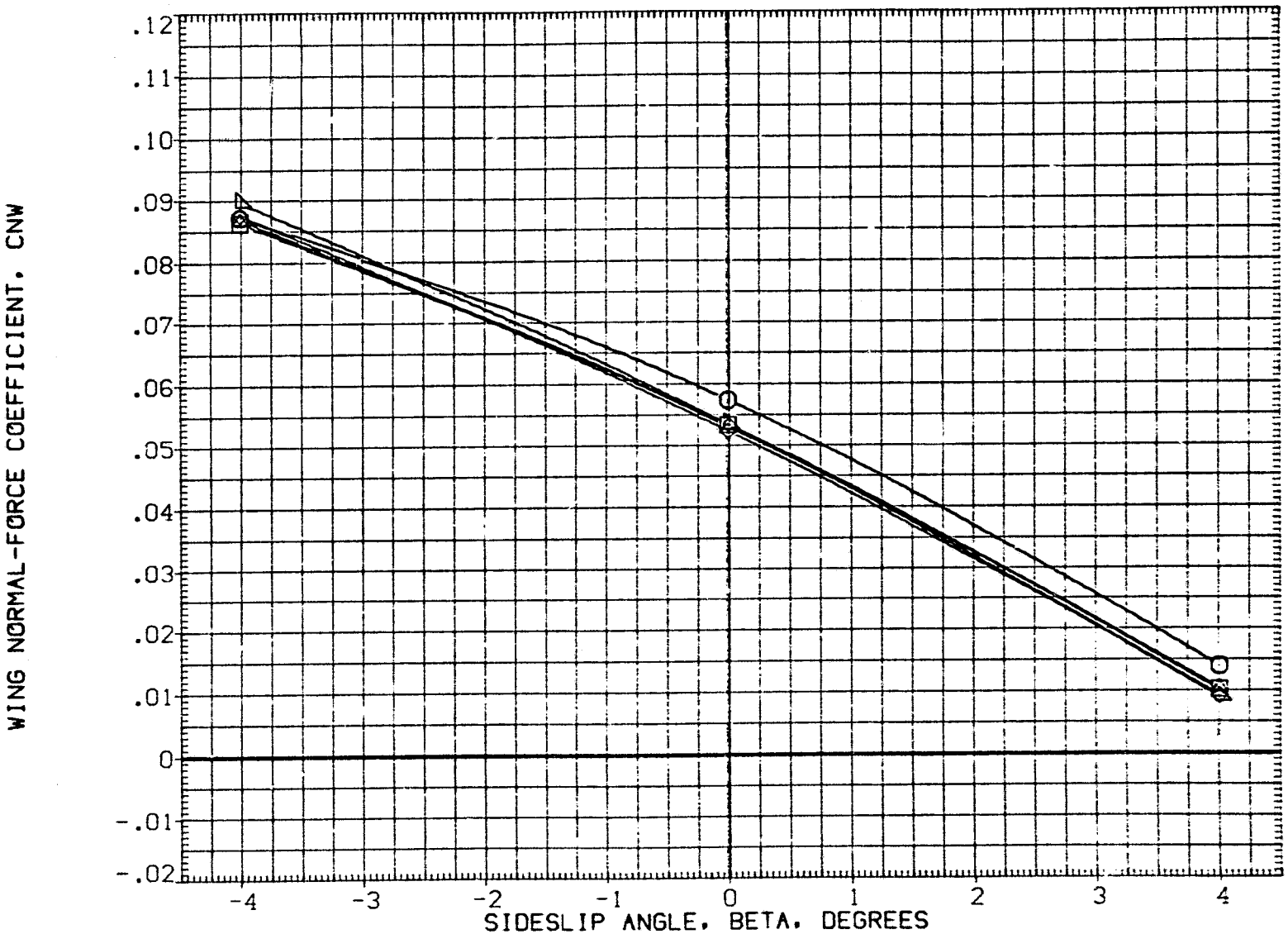



FIG. 80 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y17) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y13) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YB7) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

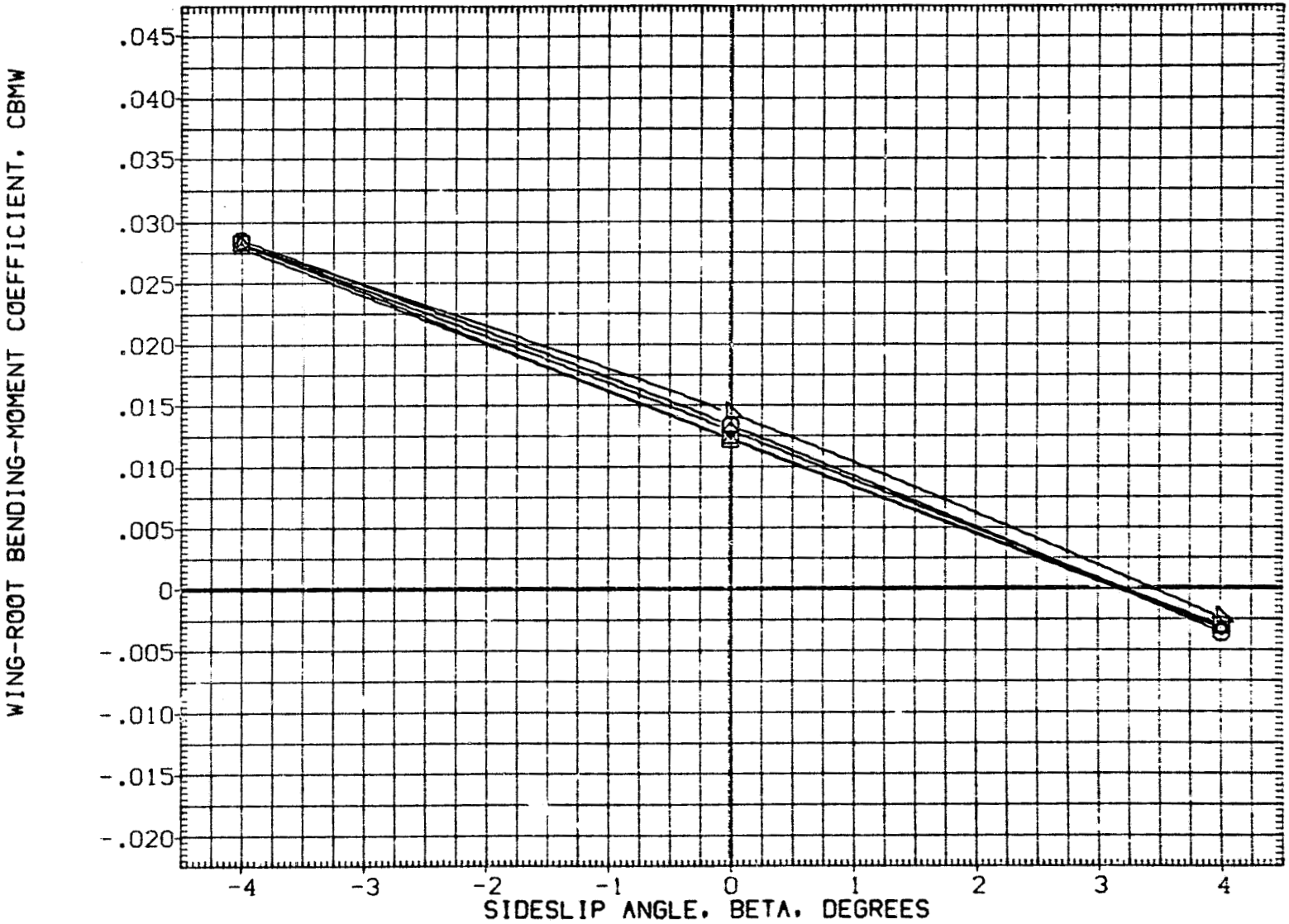



FIG. 81 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-Ob | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y17) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y13) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YB7) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

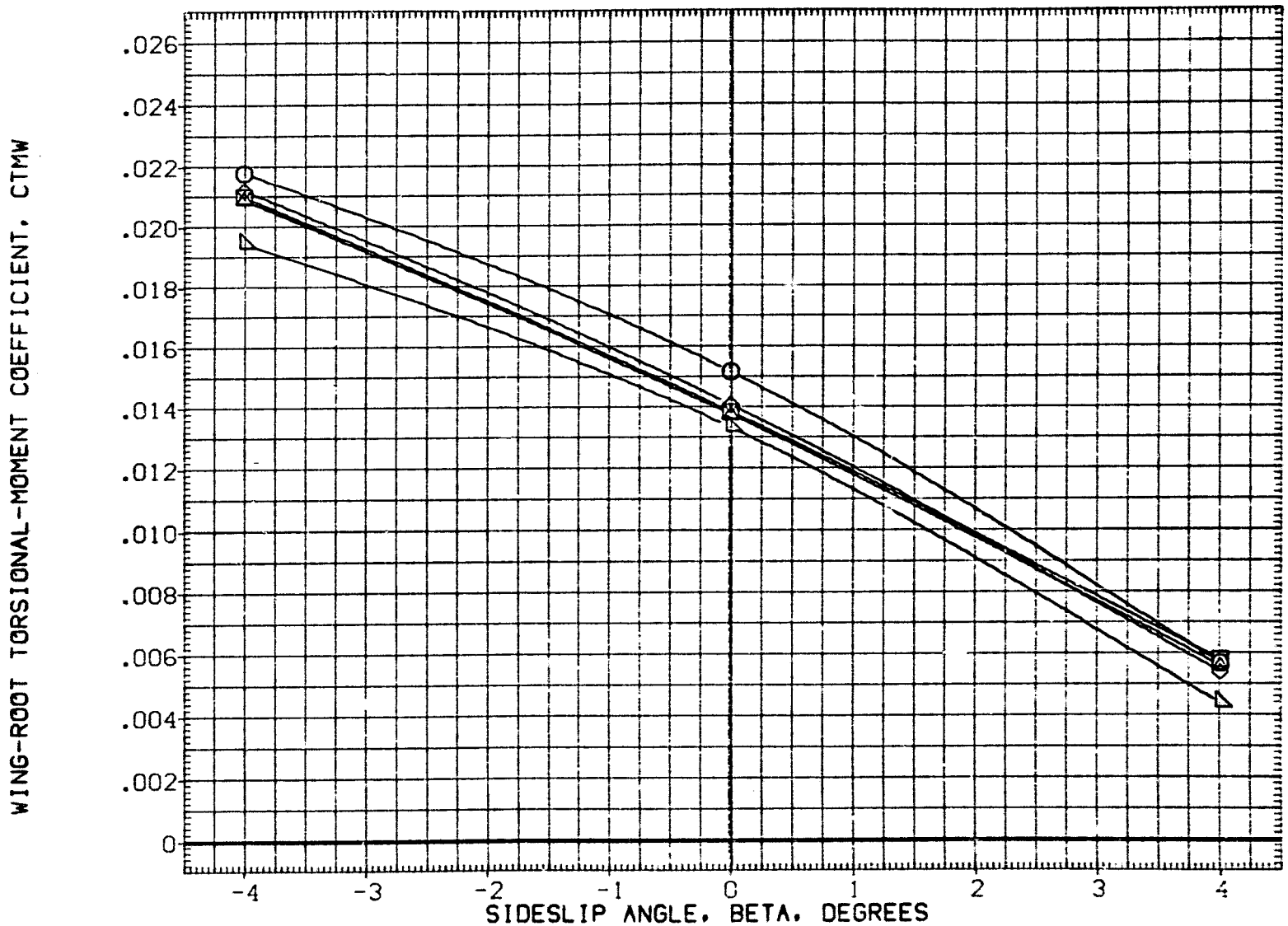



FIG. 81 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y17) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y13) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y87) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

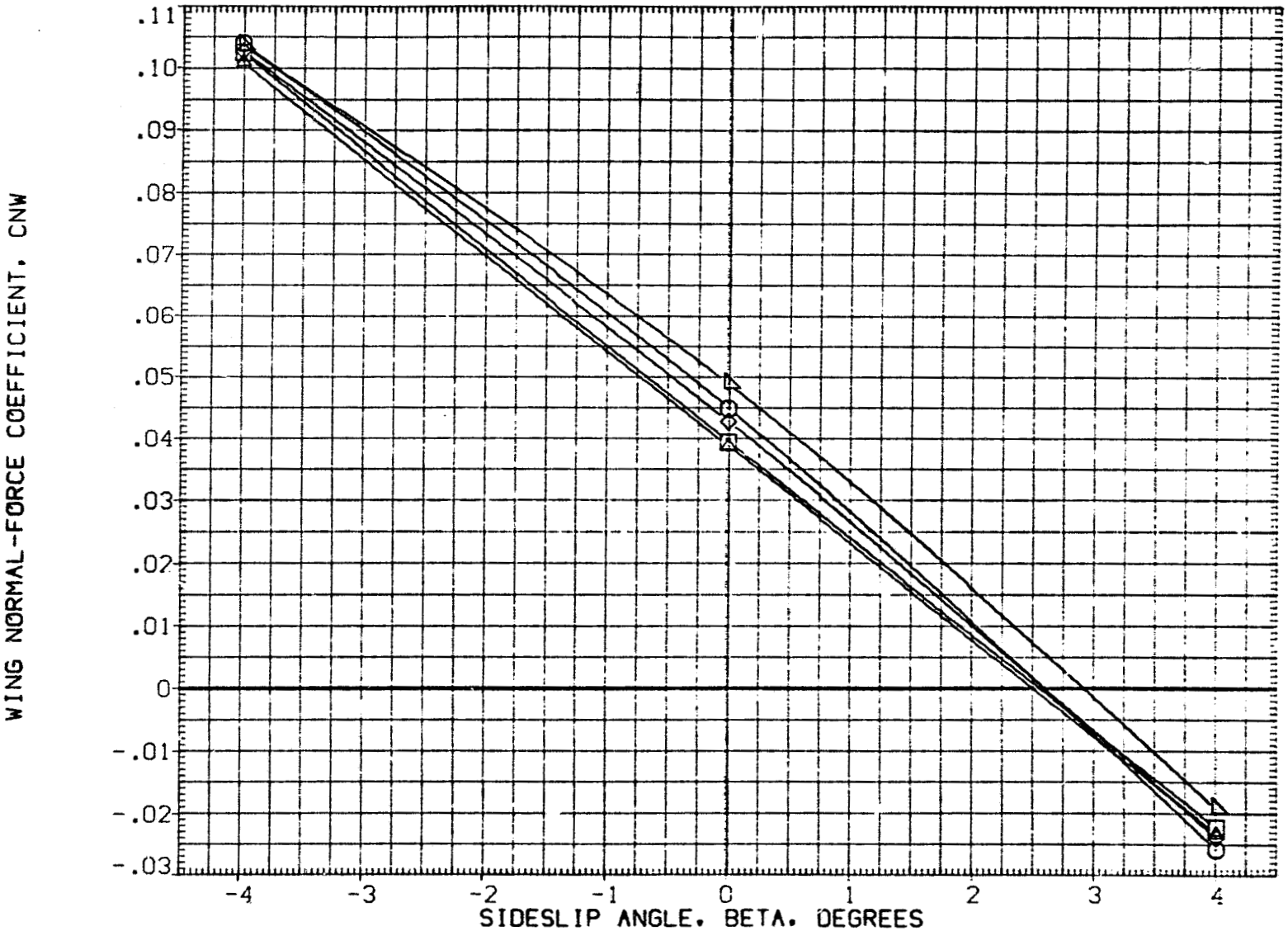



FIG. 81 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y18) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y14) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y88) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

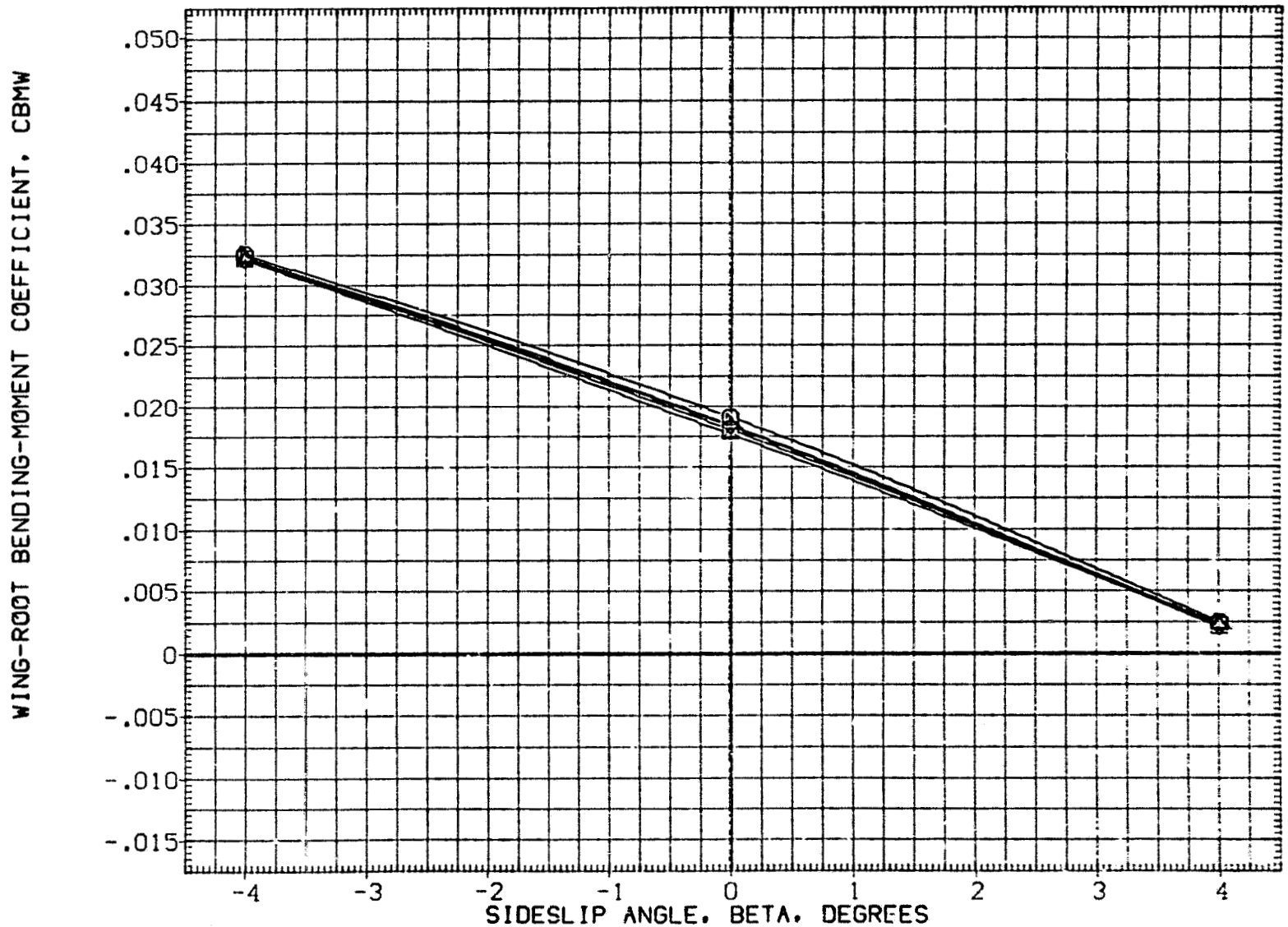



FIG. 82 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.25

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y31) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y18) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y14) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YB8) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

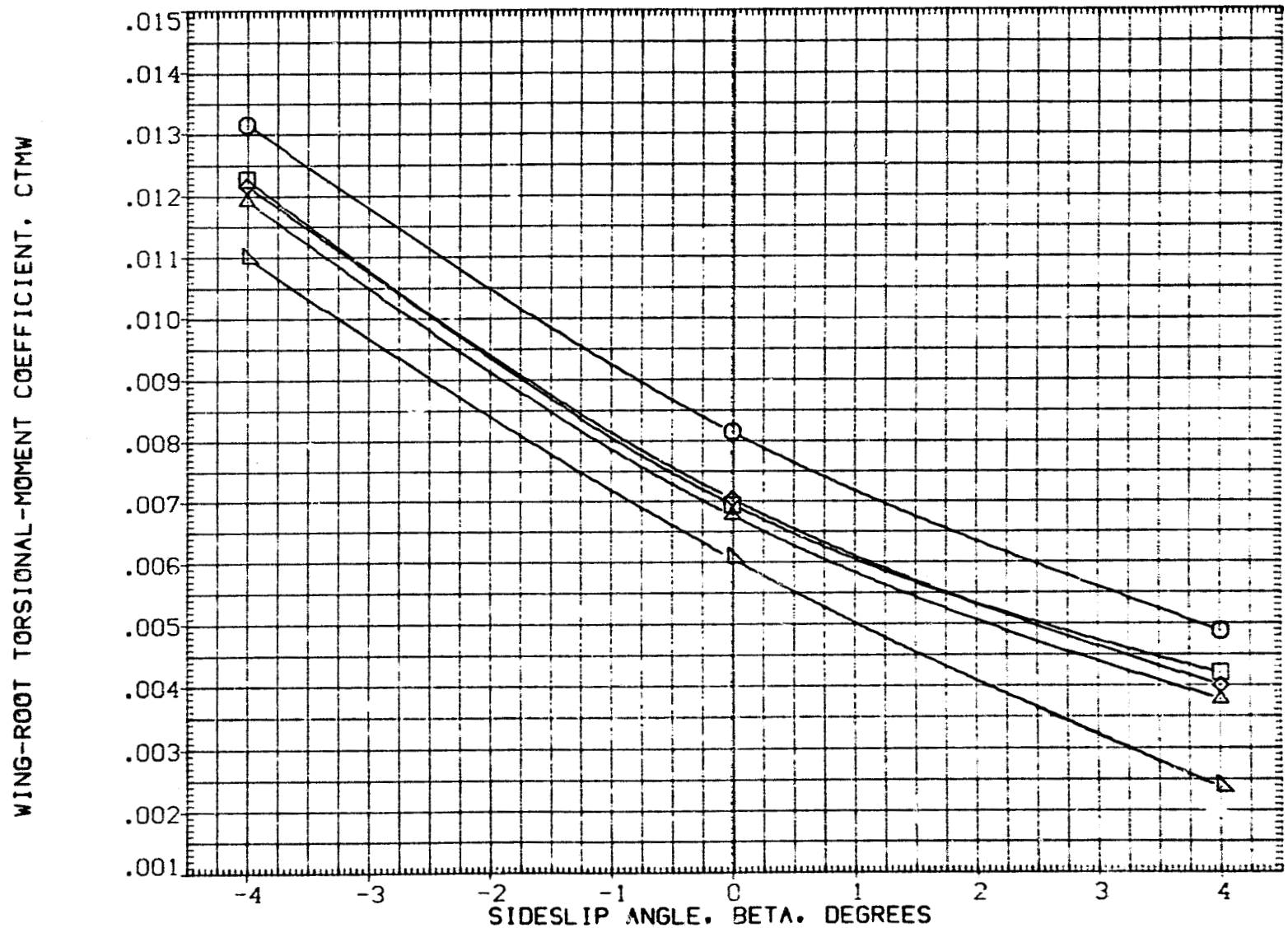



FIG. 82 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA8U OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | □ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y18) | ◇ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y14) | △ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YB8) | ▽ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

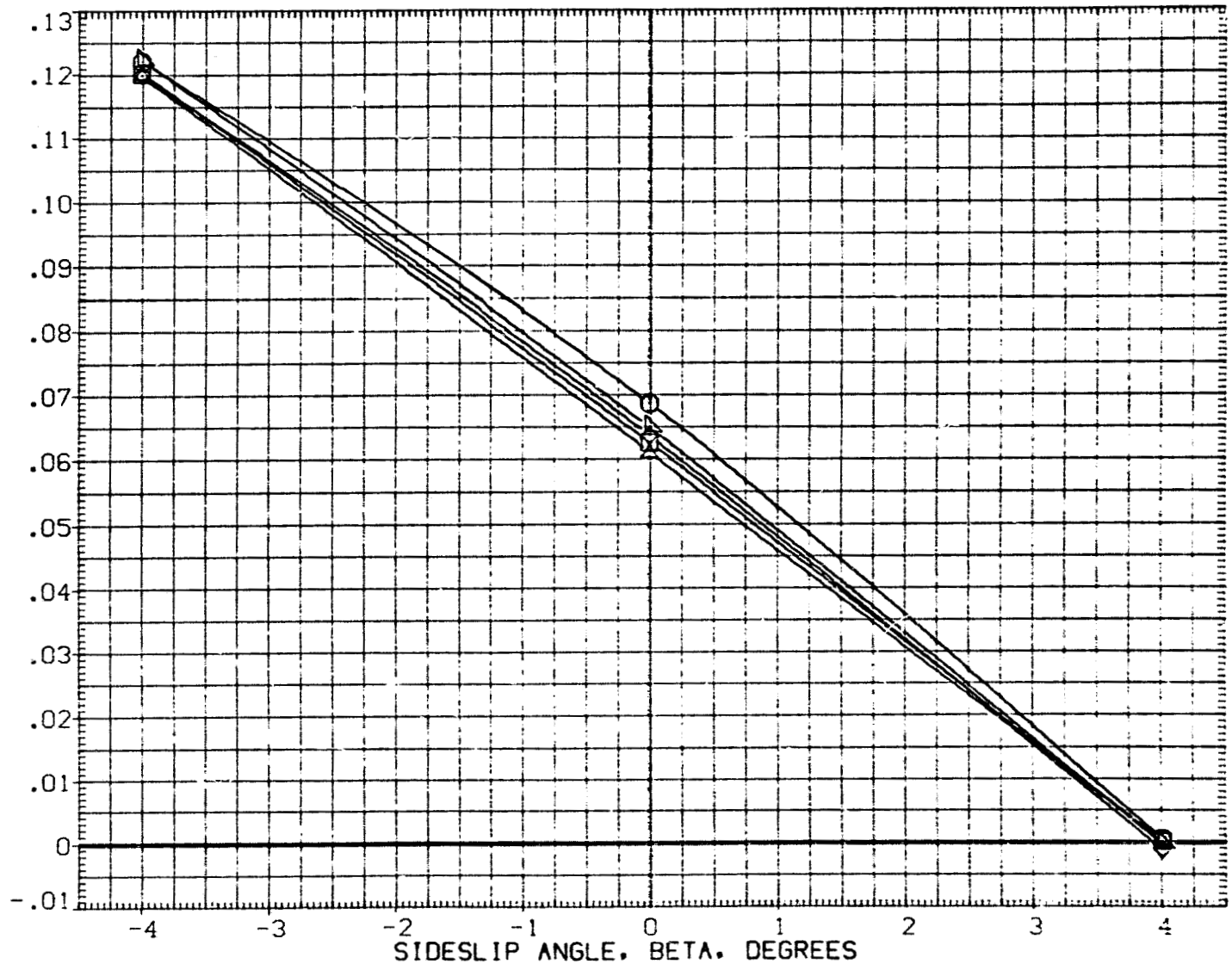



FIG. 82 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y19) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y15) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y89) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

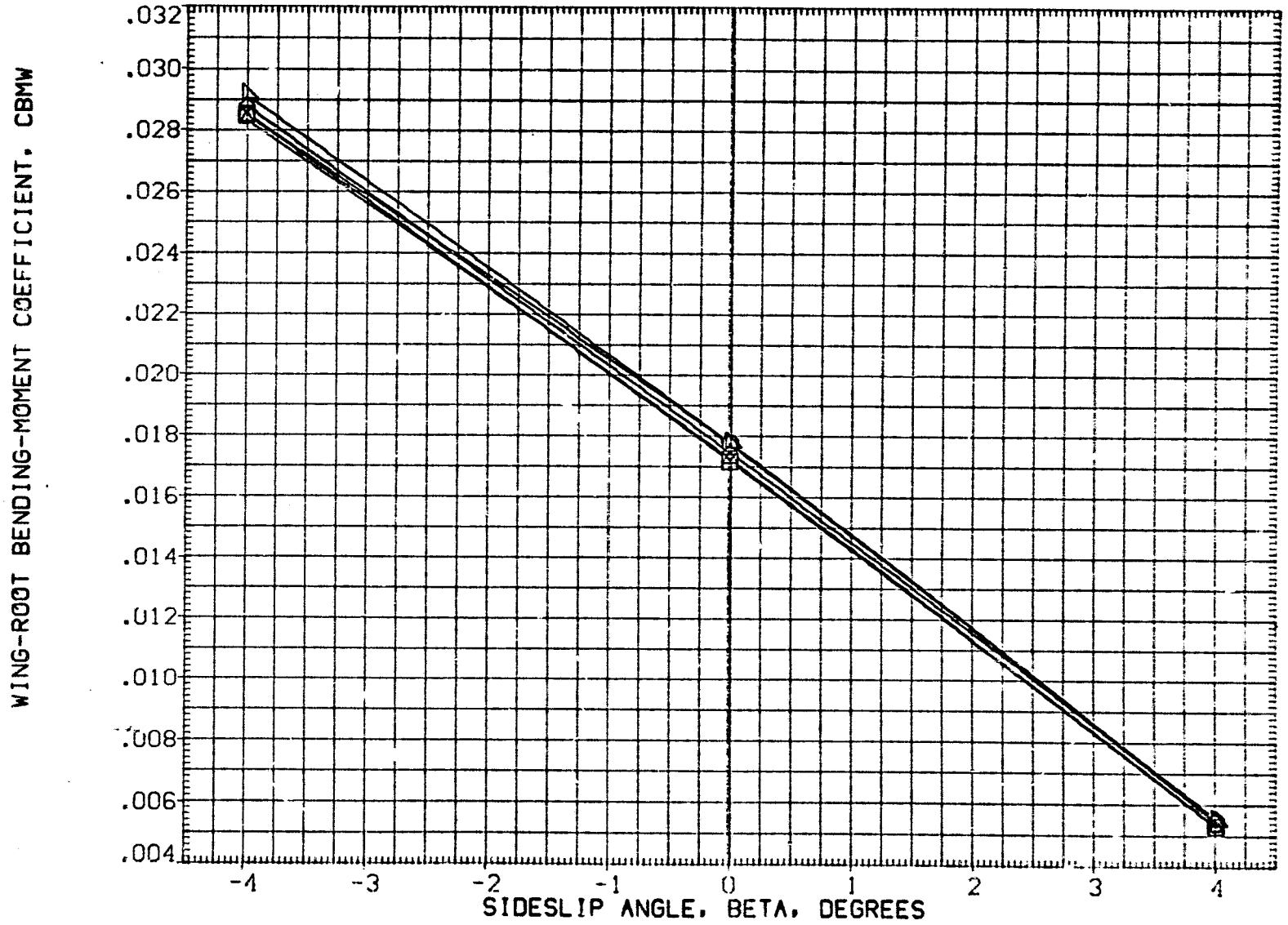



FIG. 83 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y19) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y15) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y89) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | 0200 | |

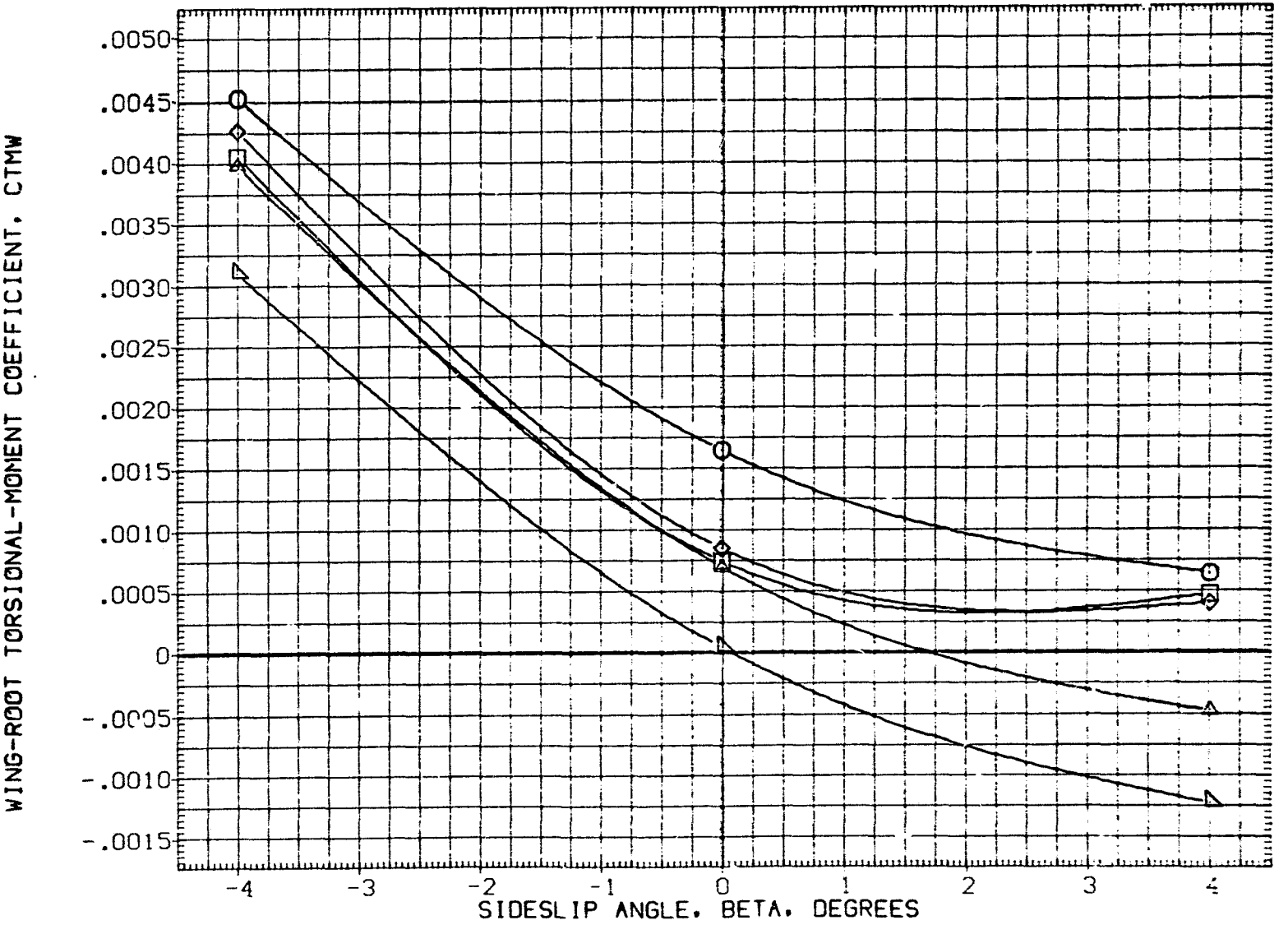



FIG. 83 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y19) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y15) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YB9) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

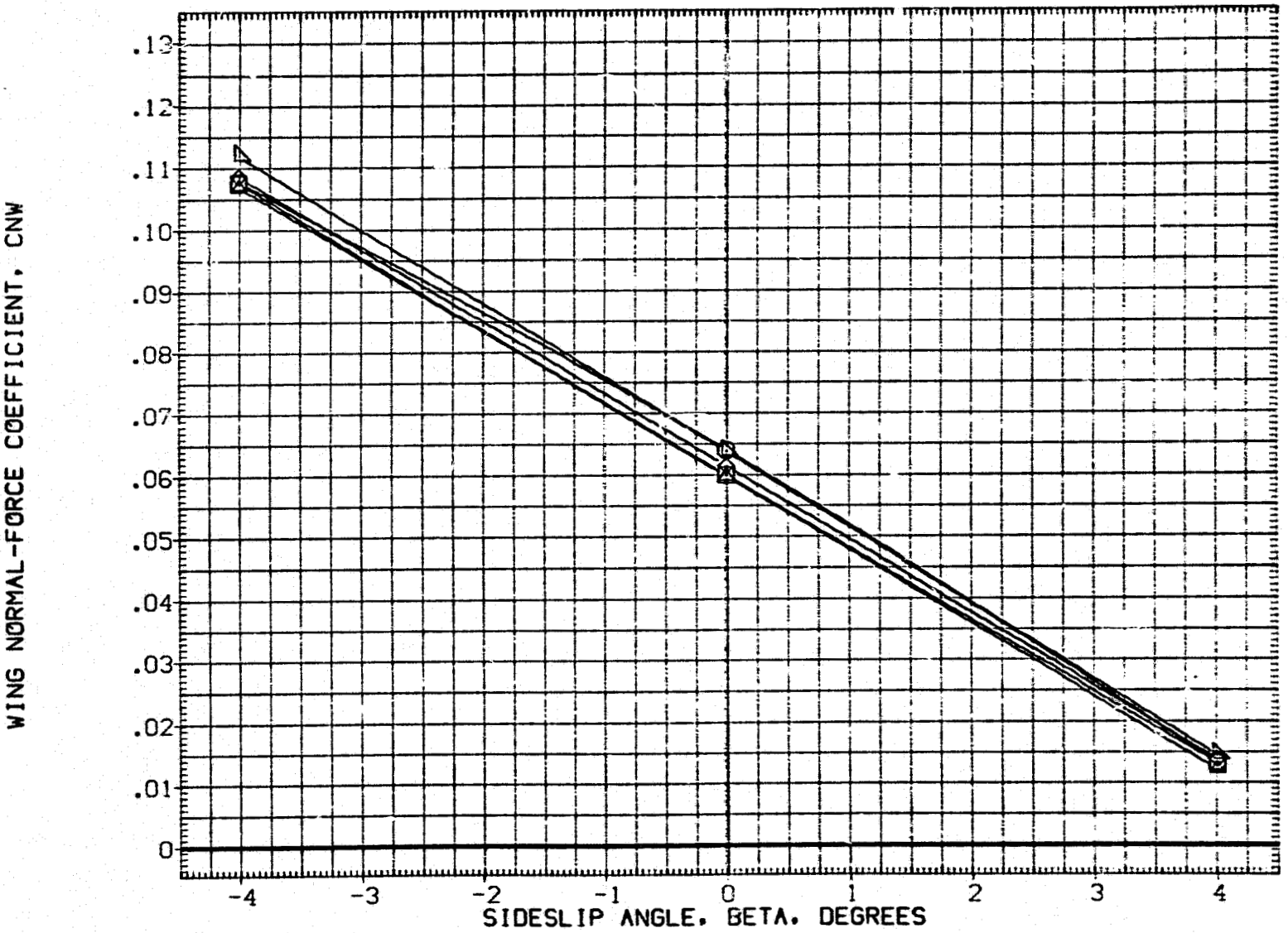



FIG. 83 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.4

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X28) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X20) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X11) ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4XB5) △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

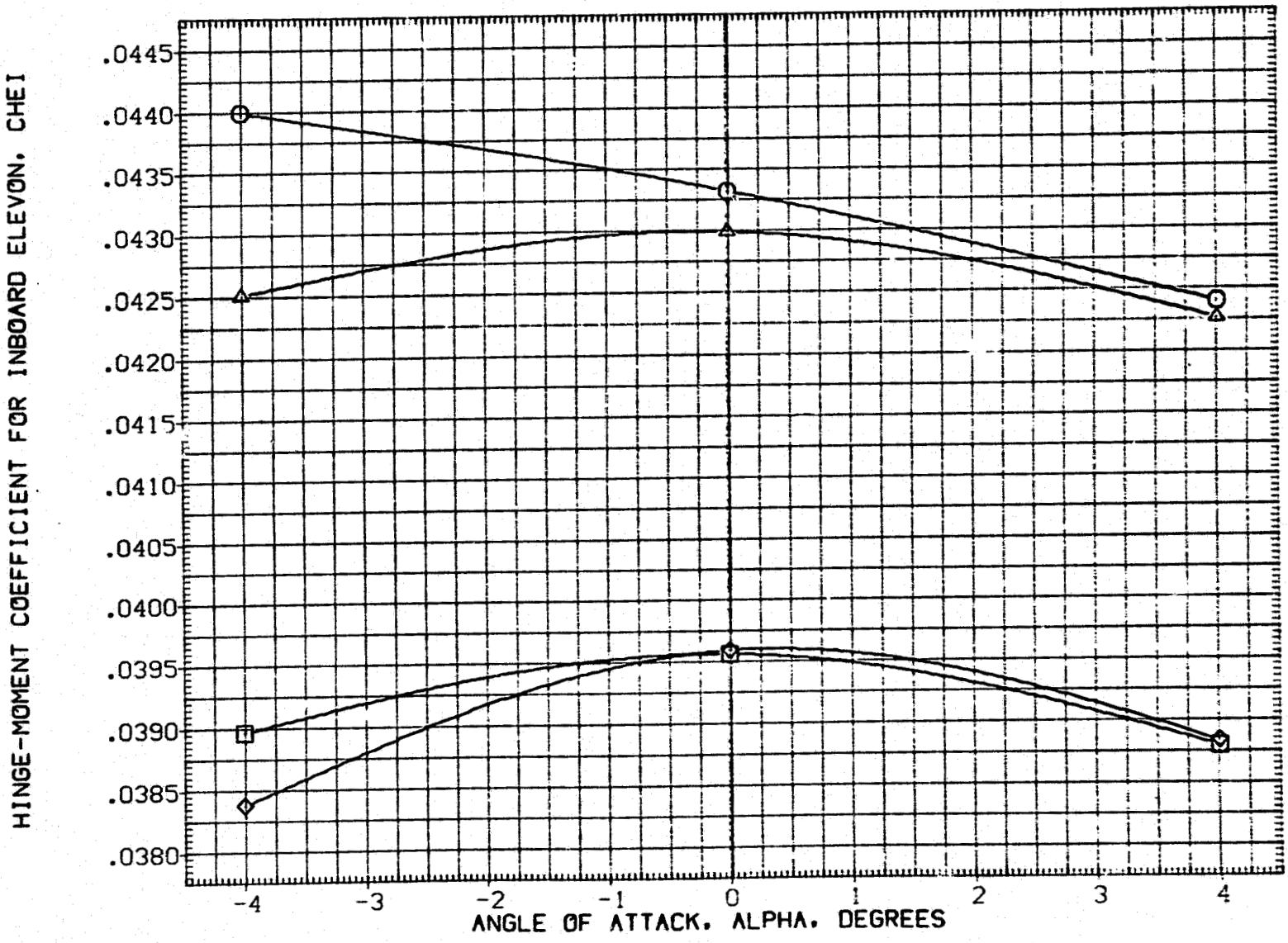



FIG. 84 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=0.6

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4XB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

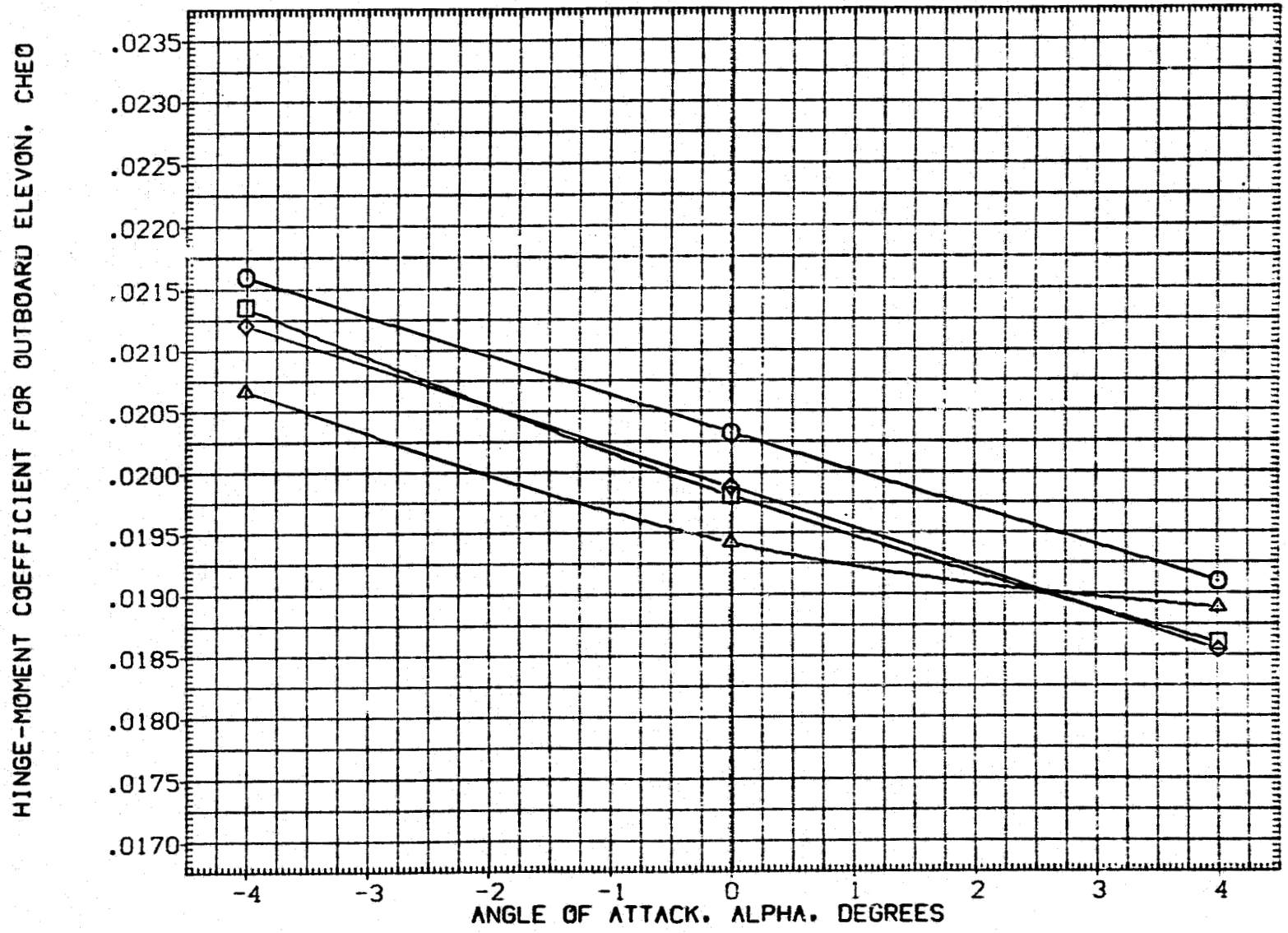



FIG. 84 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=0.6

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4X12) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4XB6) | ◺ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

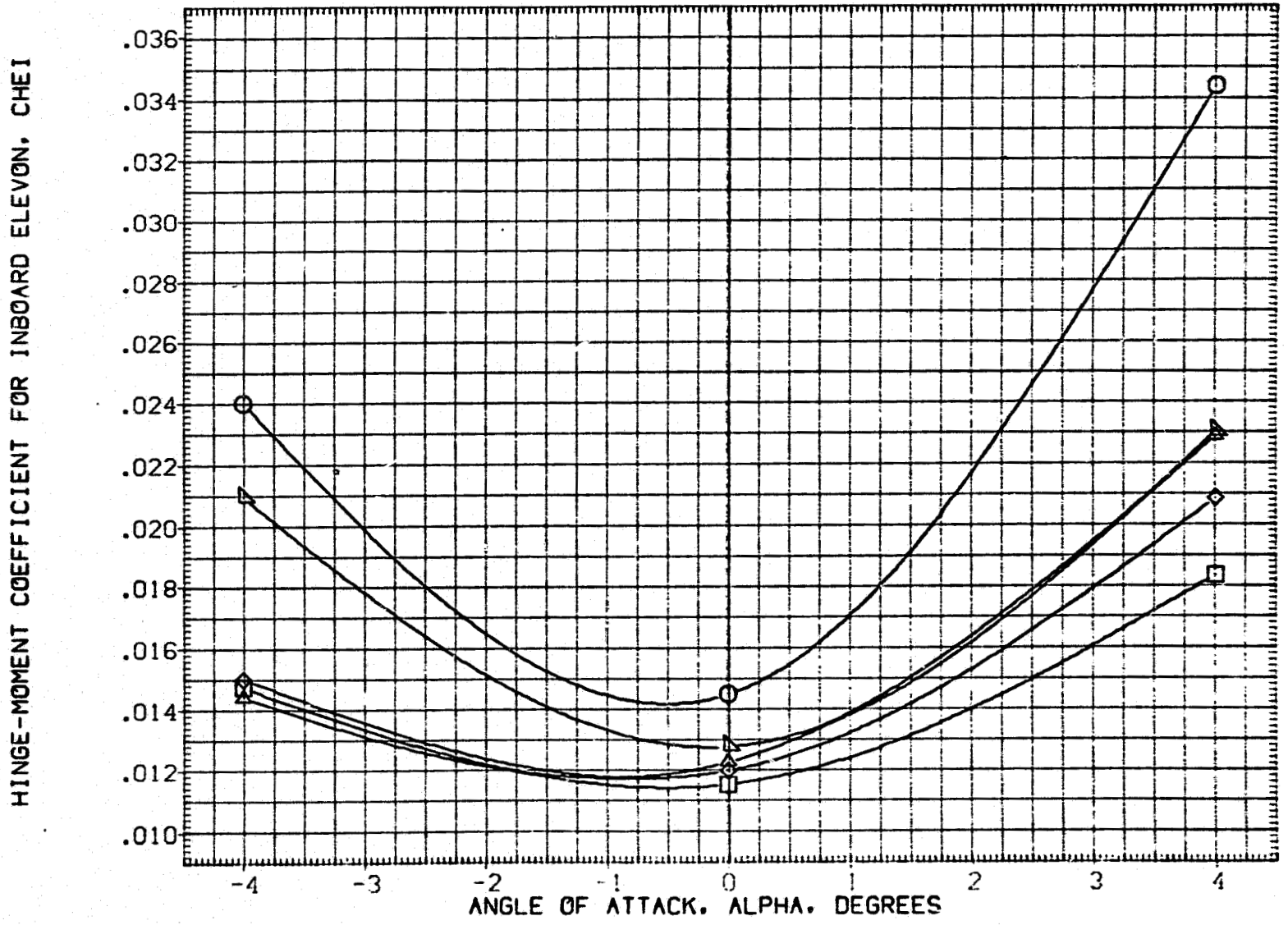



FIG. 85 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=0.9

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4X12) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4XB6) | ◺ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

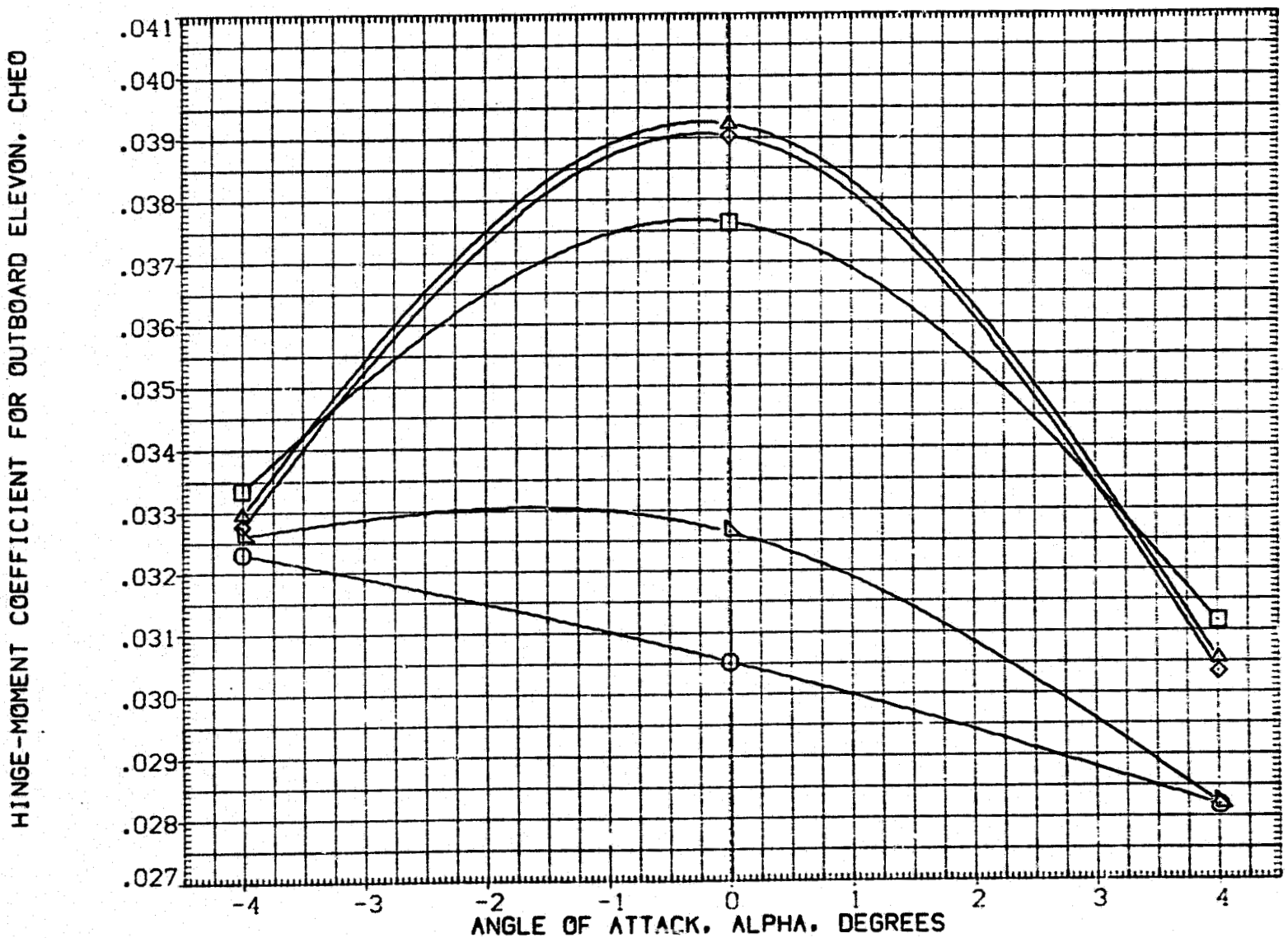



FIG. 85 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=0.9

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X17) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X13) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XB7) | ◺ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

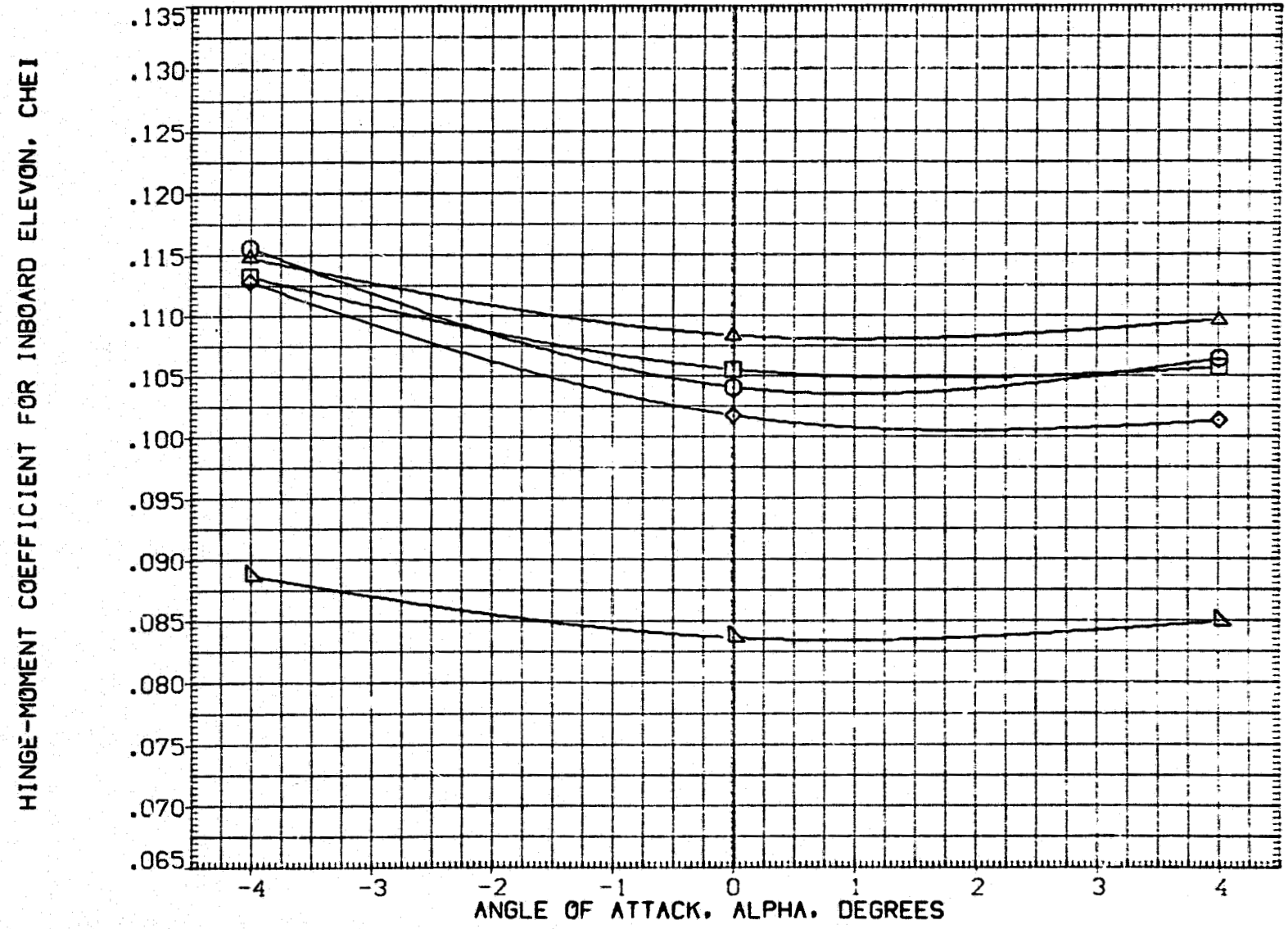



FIG. 86 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.1

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X22) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X17) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X13) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4XB7) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

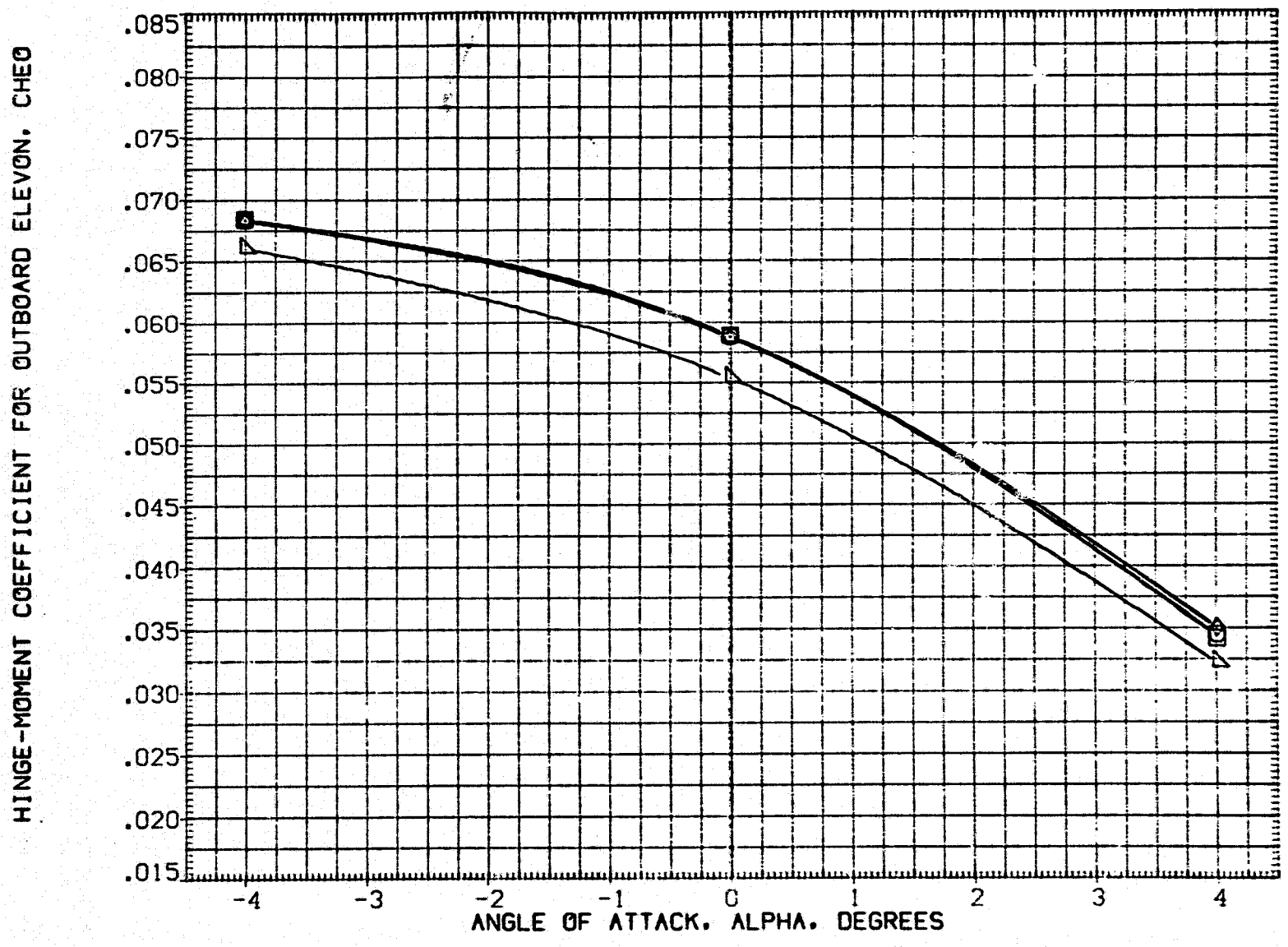



FIG. 86 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.1

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X23) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X18) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X14) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X88) | ◺ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

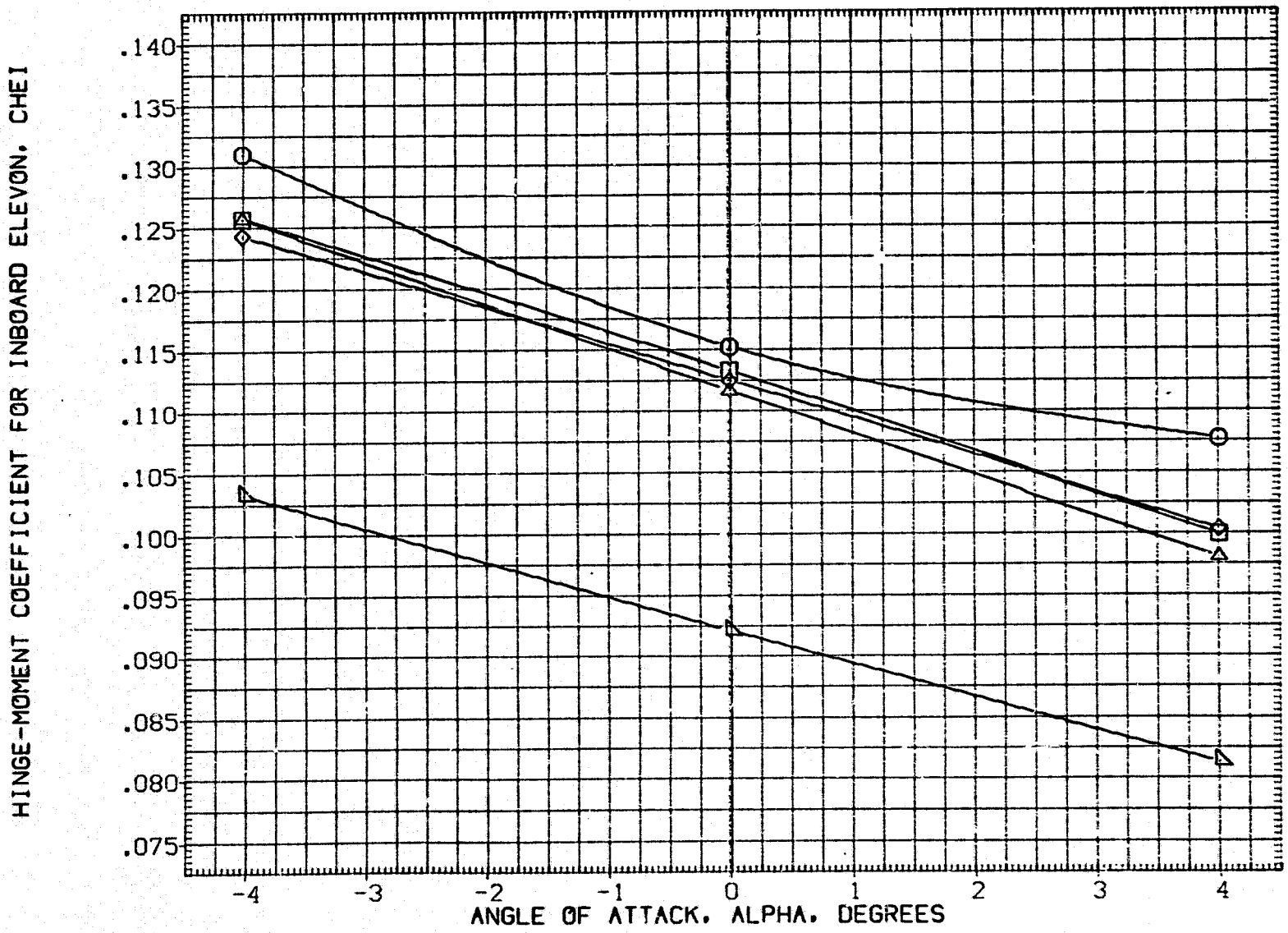



FIG. 87 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.25

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X23) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X18) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X14) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4XB8) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

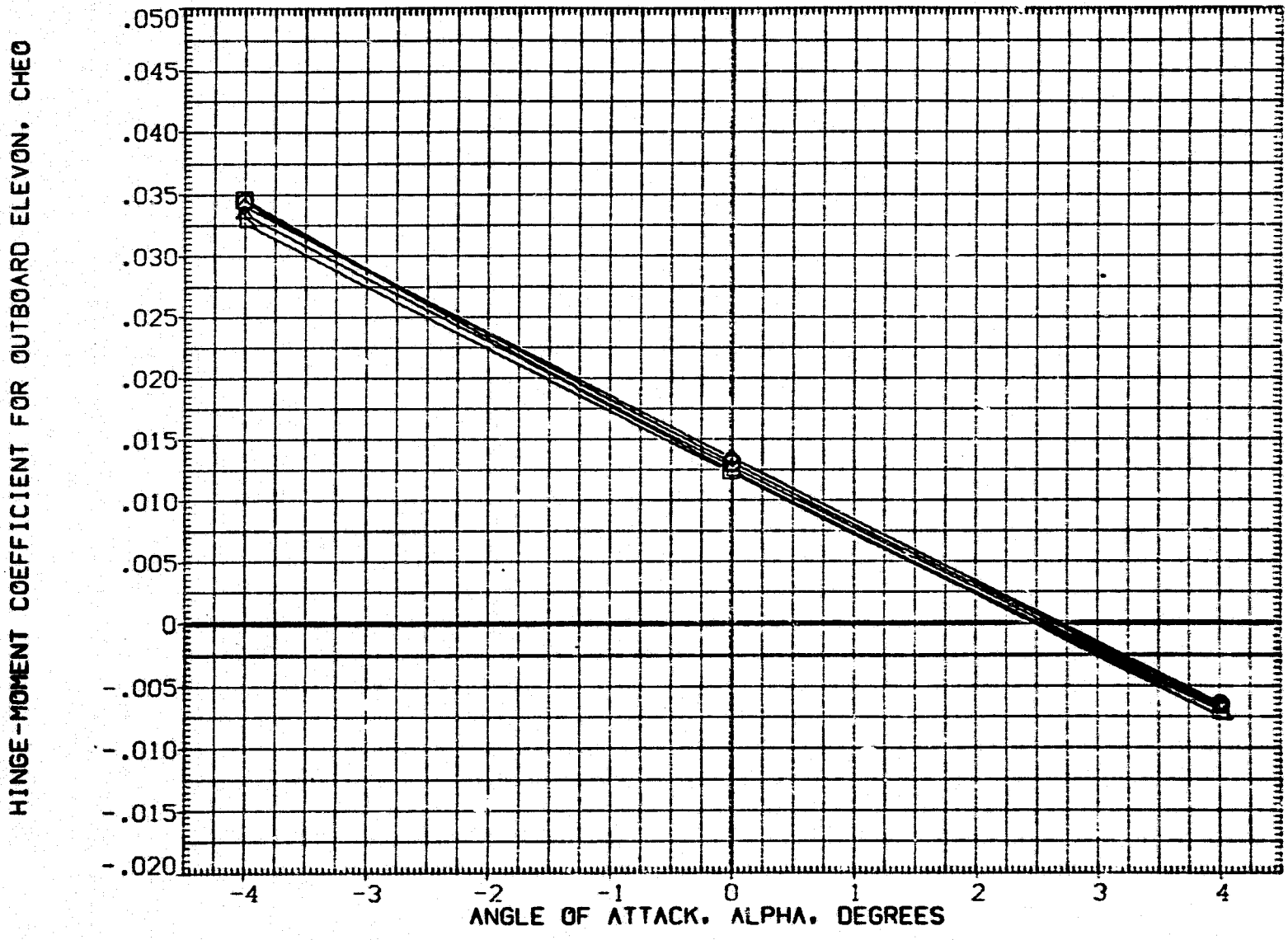



FIG. 87 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.25

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X24) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X19) | ⊿ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X15) | ⊿ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4XB9) | ⊿ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

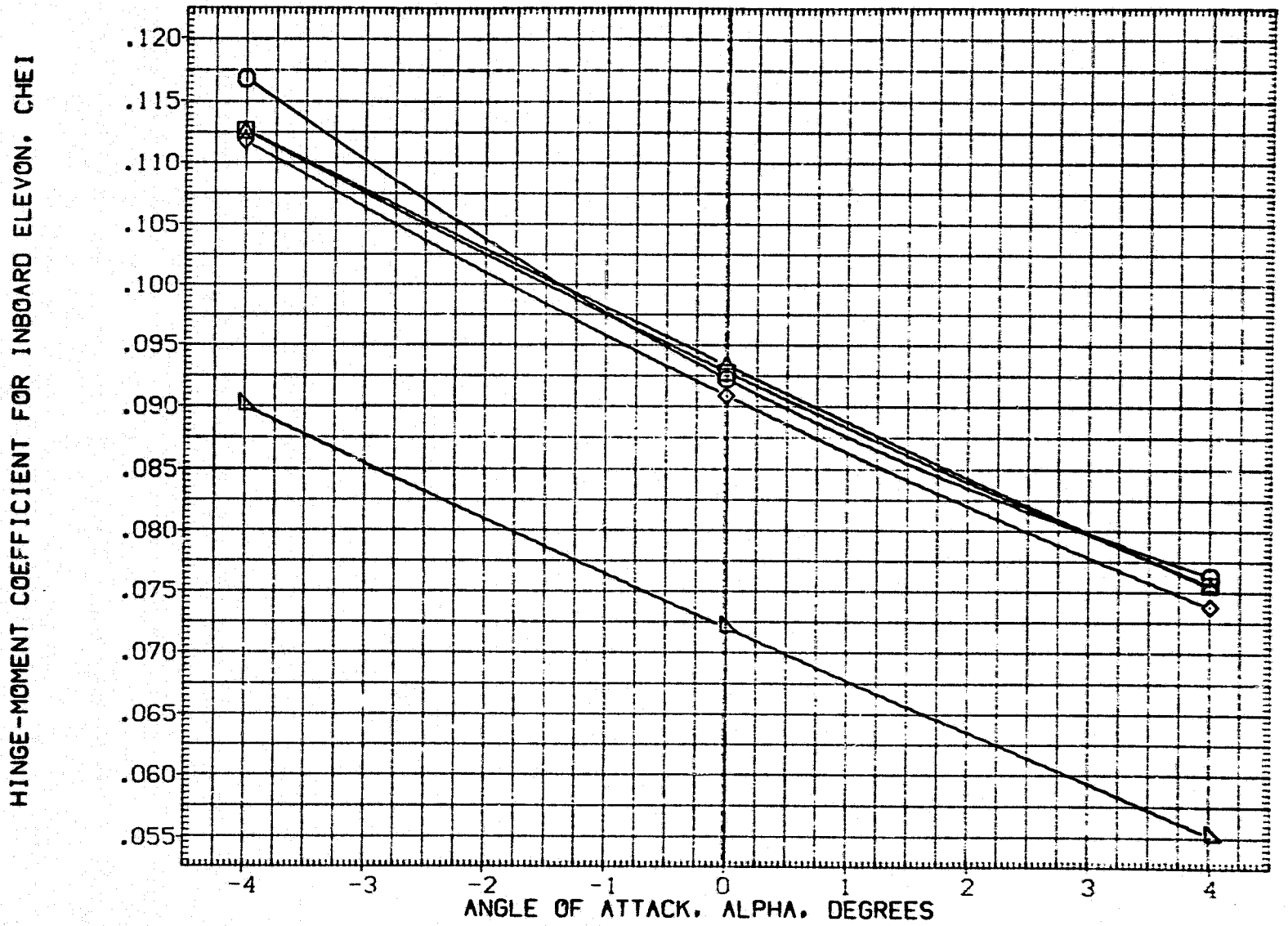



FIG. 88 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.4

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X24) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X19) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X15) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X89) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

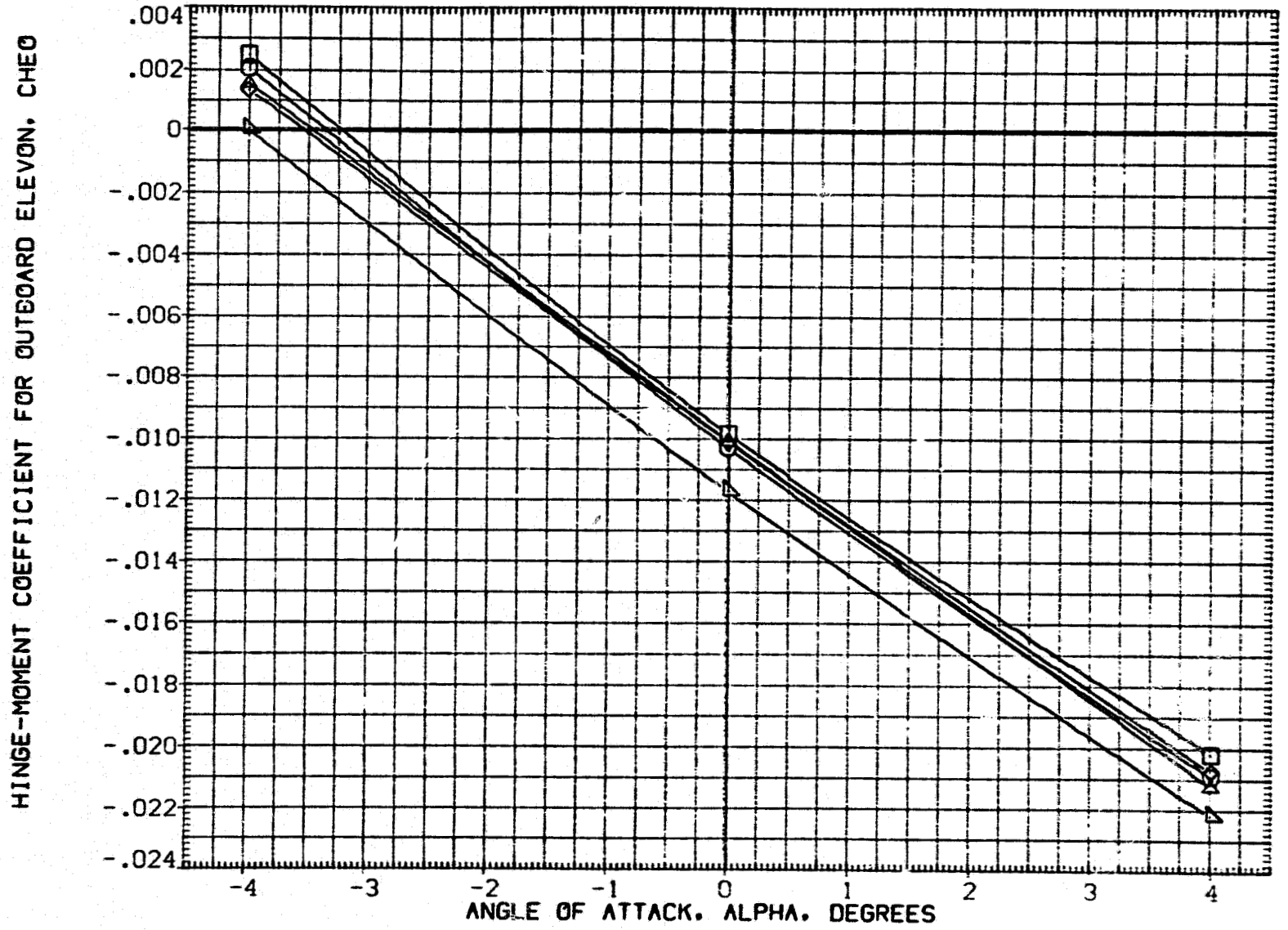



FIG. 88 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.4

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4YB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

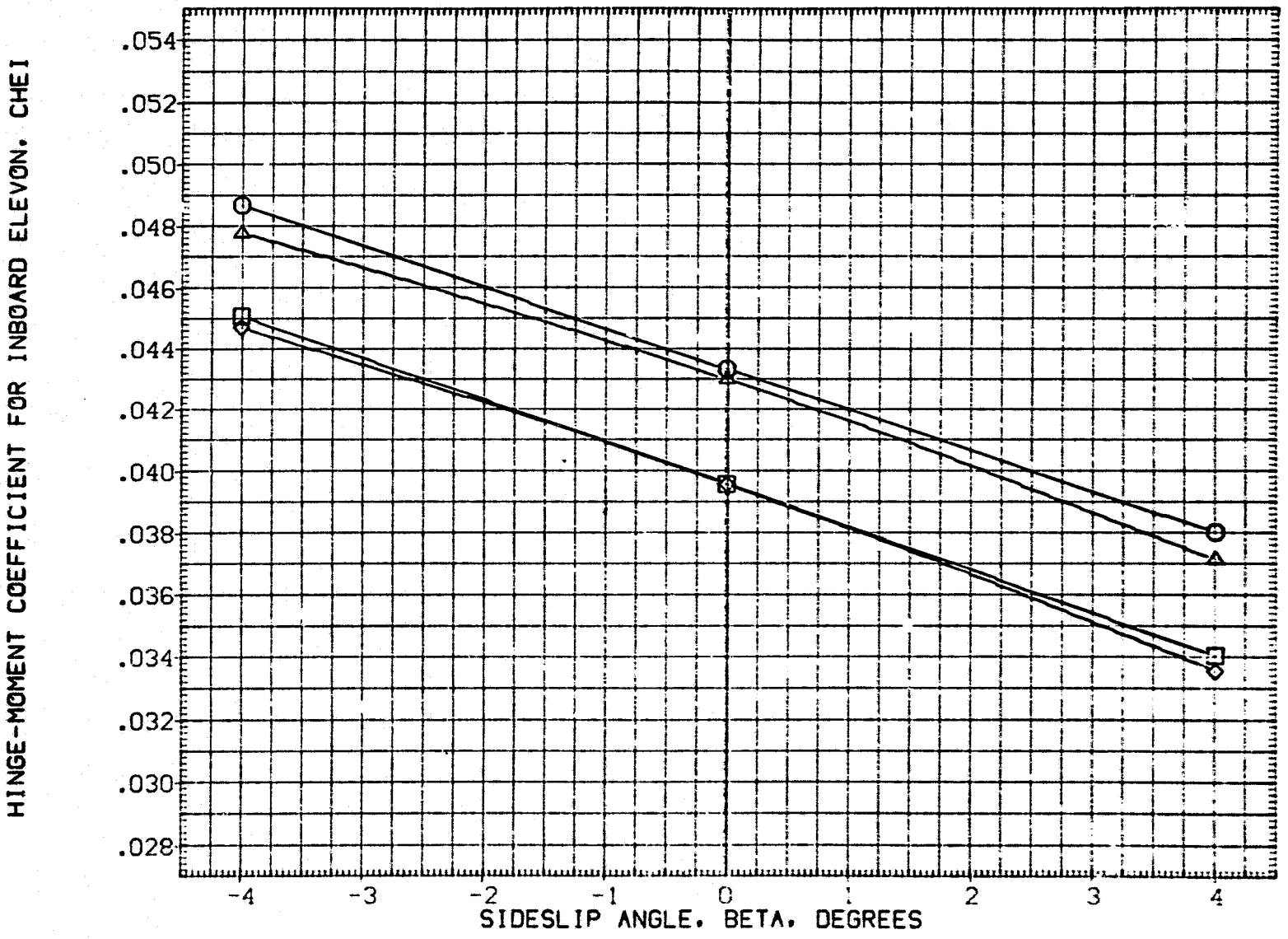



FIG. 89 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .600 | 3.400 |
| (RE4YB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .600 | 3.400 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

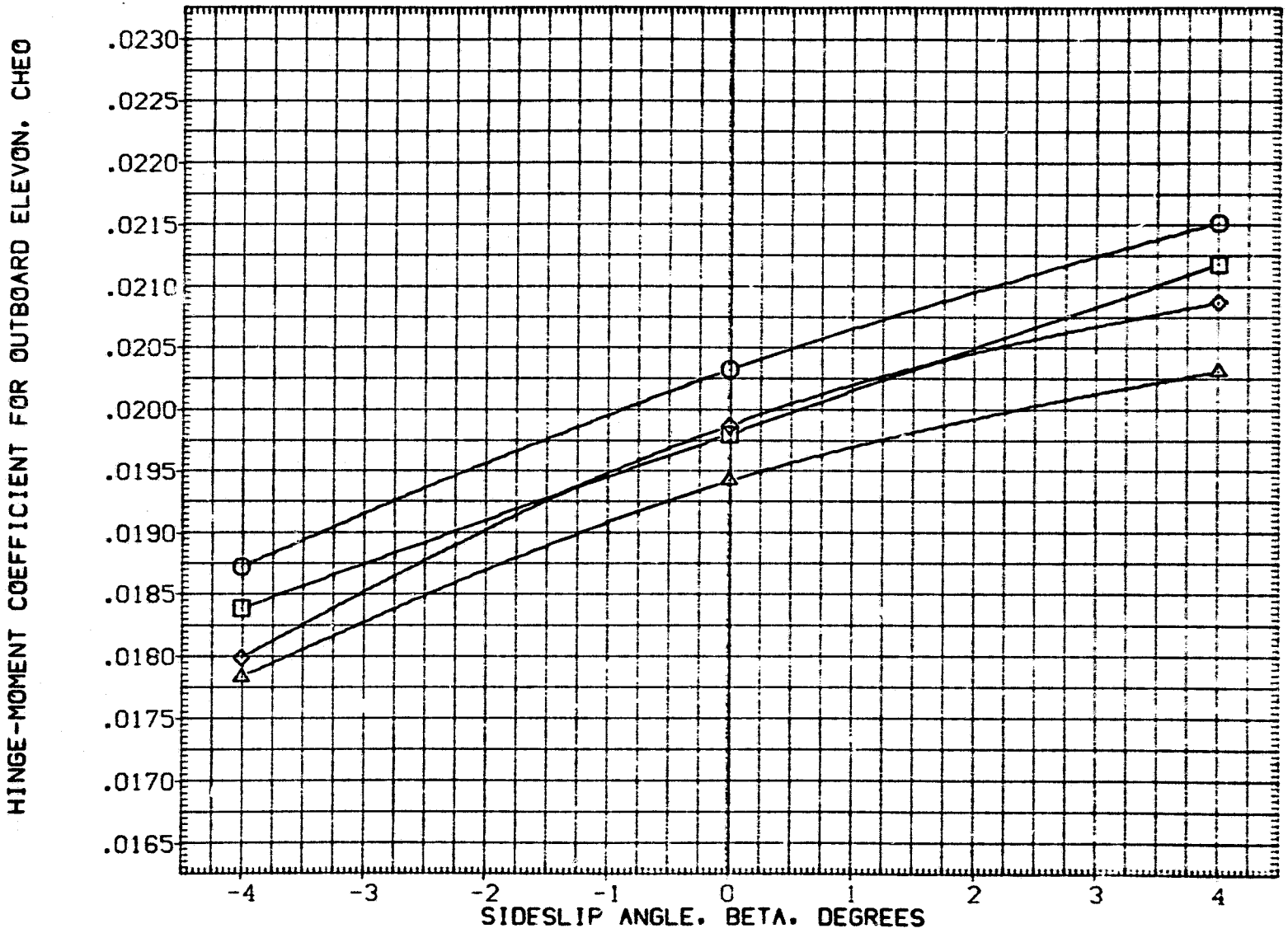



FIG. 89 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW. MACH=0.6

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 4.250 |
| (RE4Y12) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4YB6) | | ARC 11-023 IA80 OTS (SRE NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

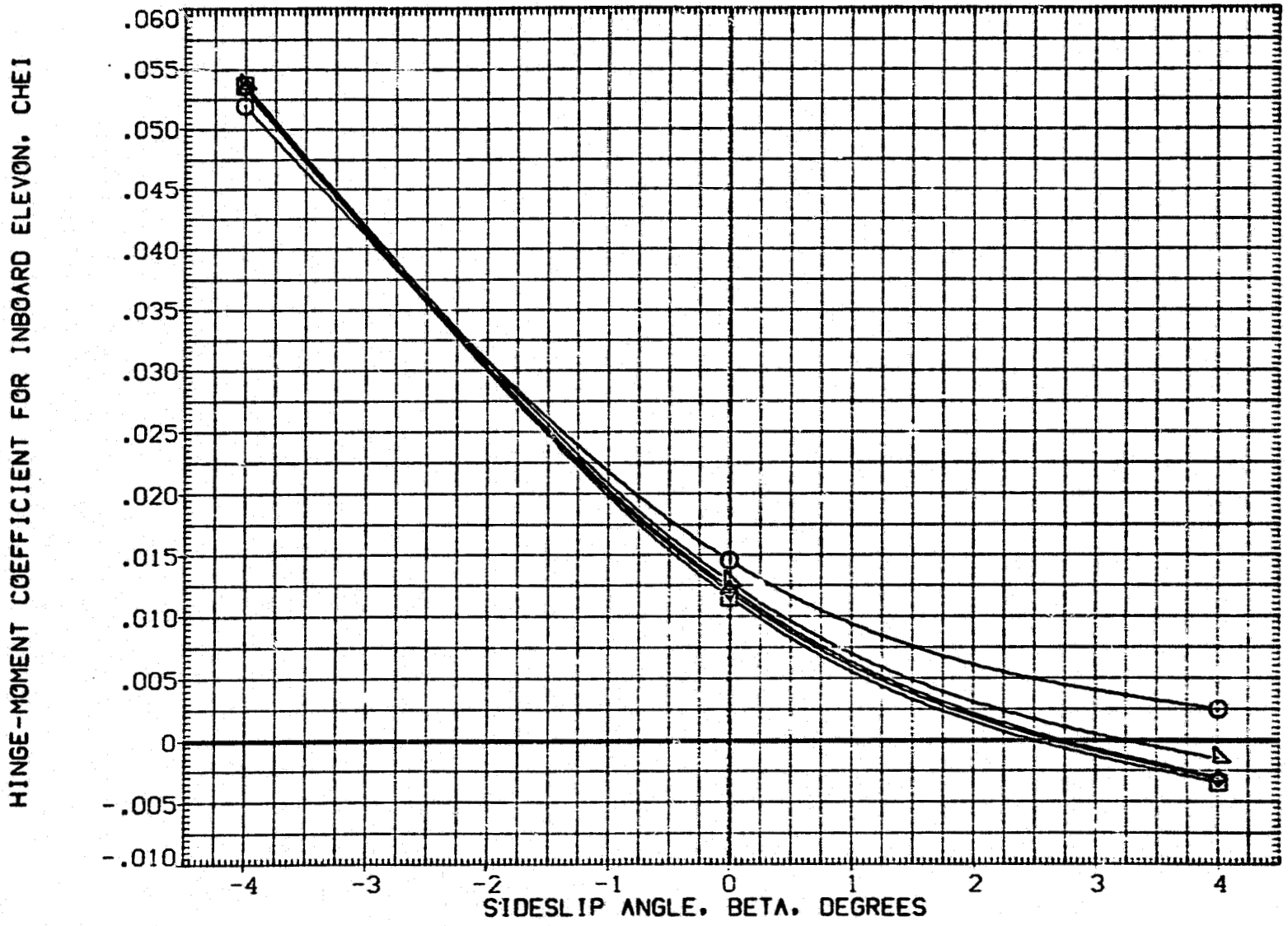



FIG. 90 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW. MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y21) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .900 | 1.250 |
| (RE4Y12) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .900 | 4.250 |
| (RE4YB6) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .900 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

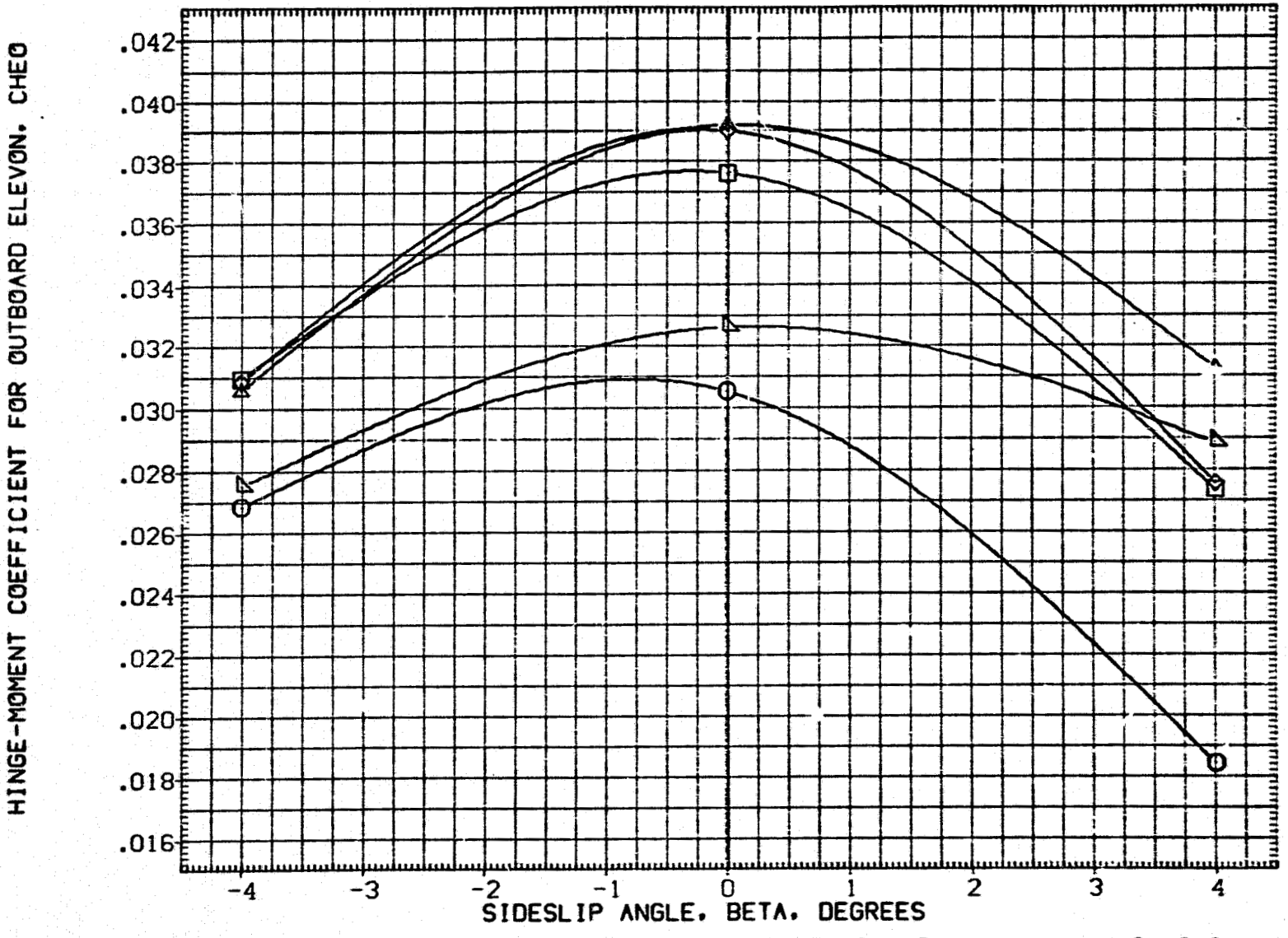



FIG. 90 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=0.9

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y17) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y13) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YB7) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

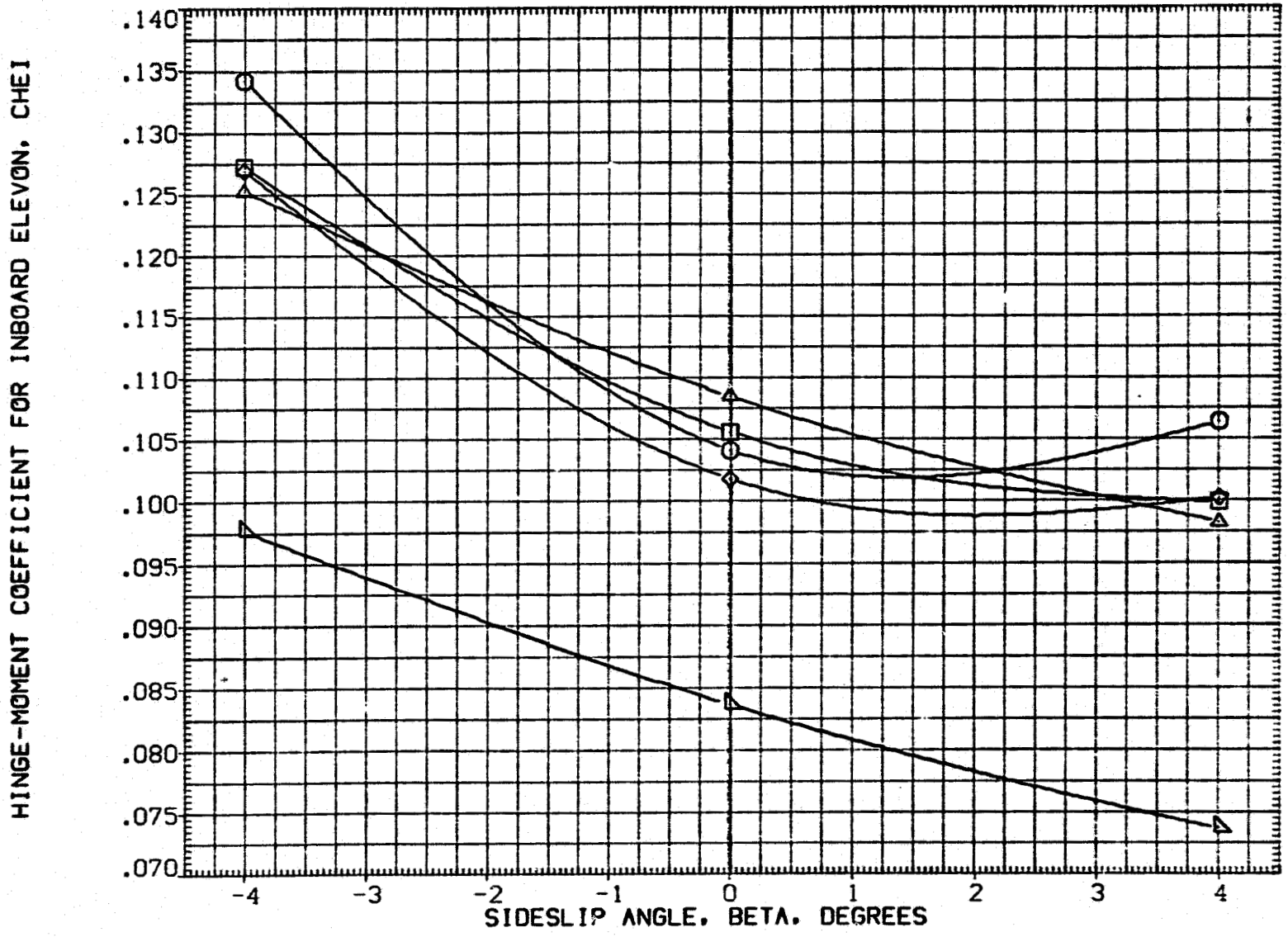



FIG. 91 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW. MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y22) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y17) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y13) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.100 | 4.250 |
| (RE4YB7) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.100 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

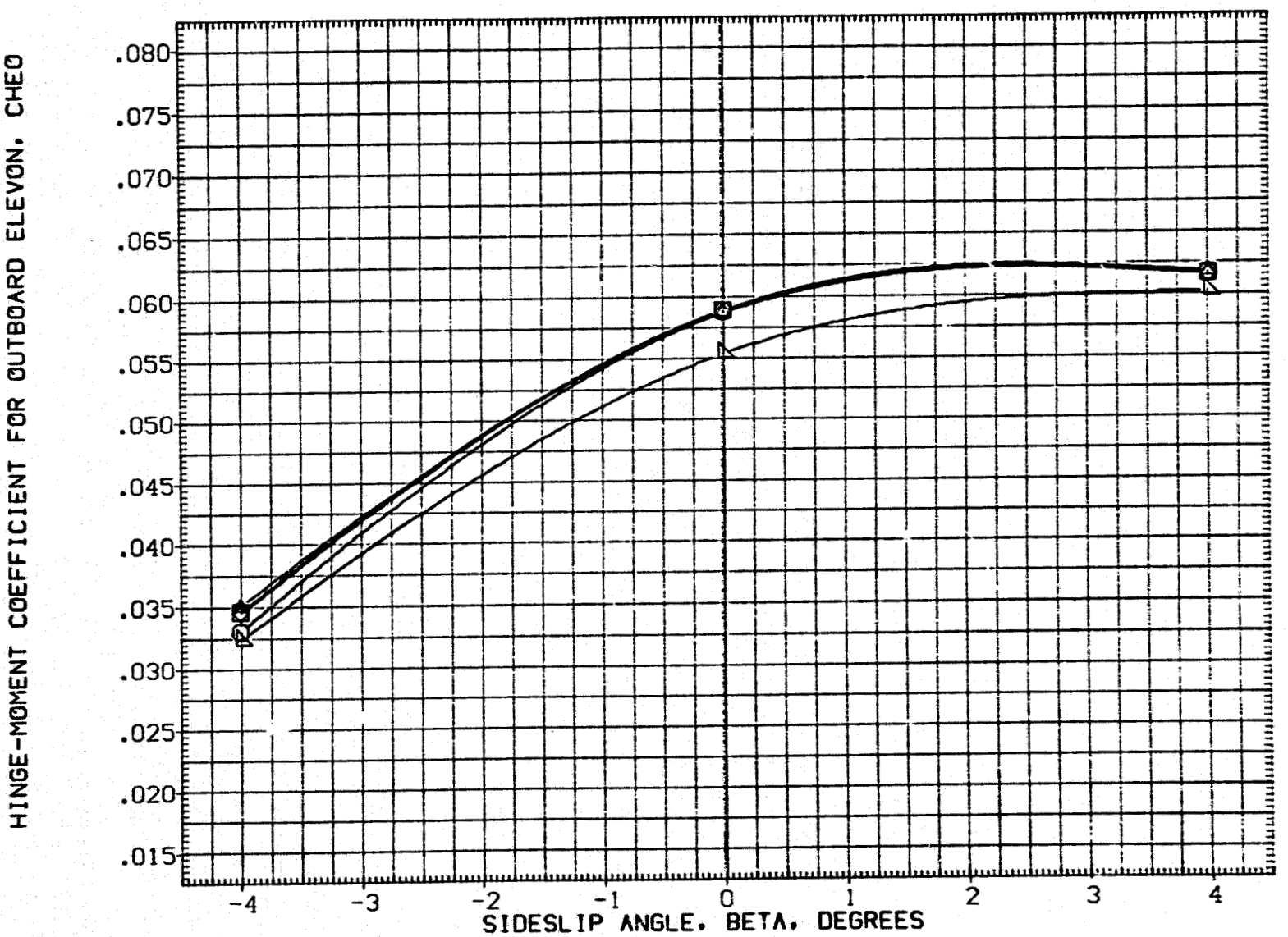



FIG. 91 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.1

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | □ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y18) | ◇ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y14) | △ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y88) | ▷ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

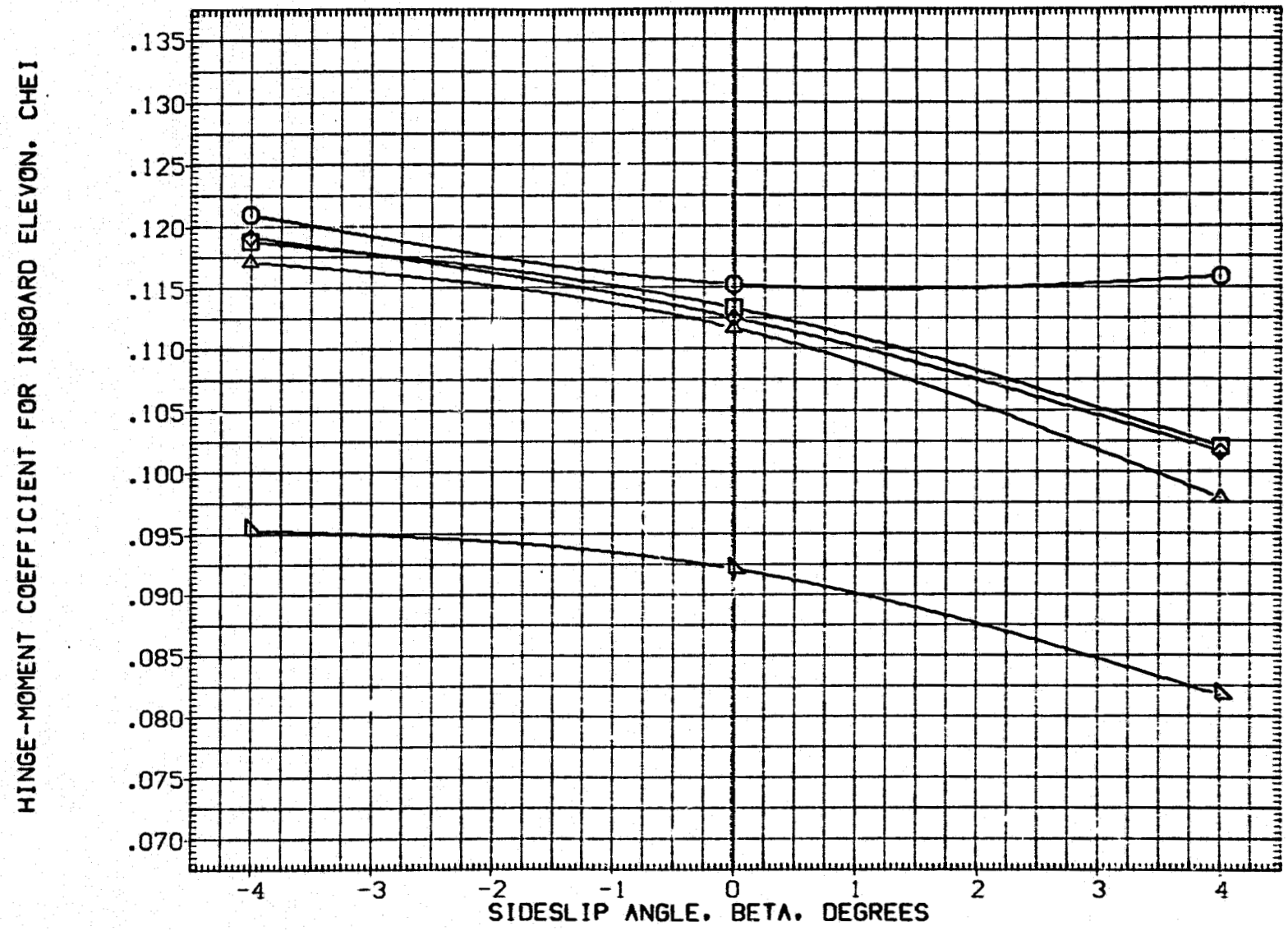



FIG. 92 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y23) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y18) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y14) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.250 | 4.250 |
| (RE4YB8) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.250 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

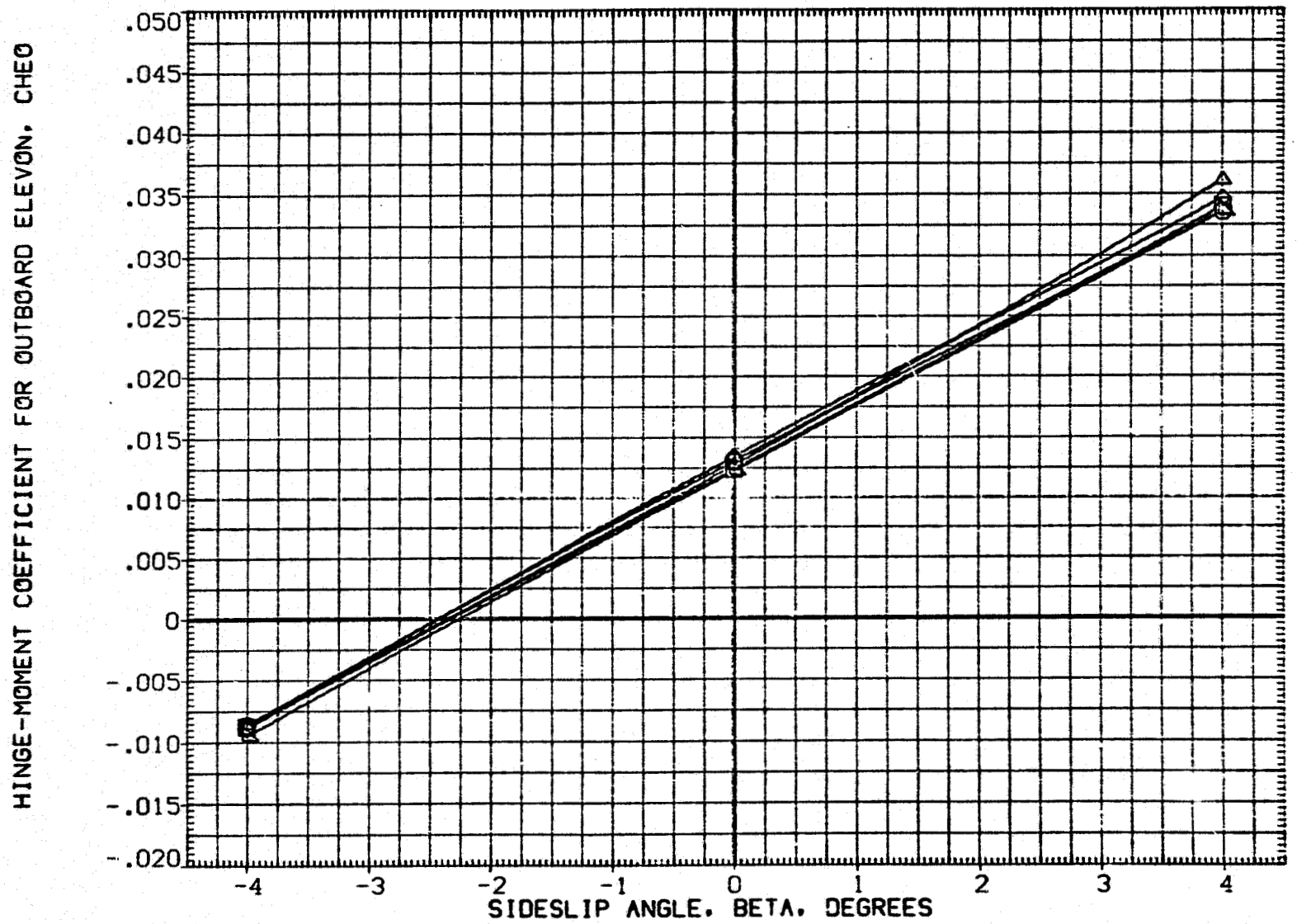



FIG. 92 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.25

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y19) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y15) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YB9) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.40C | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

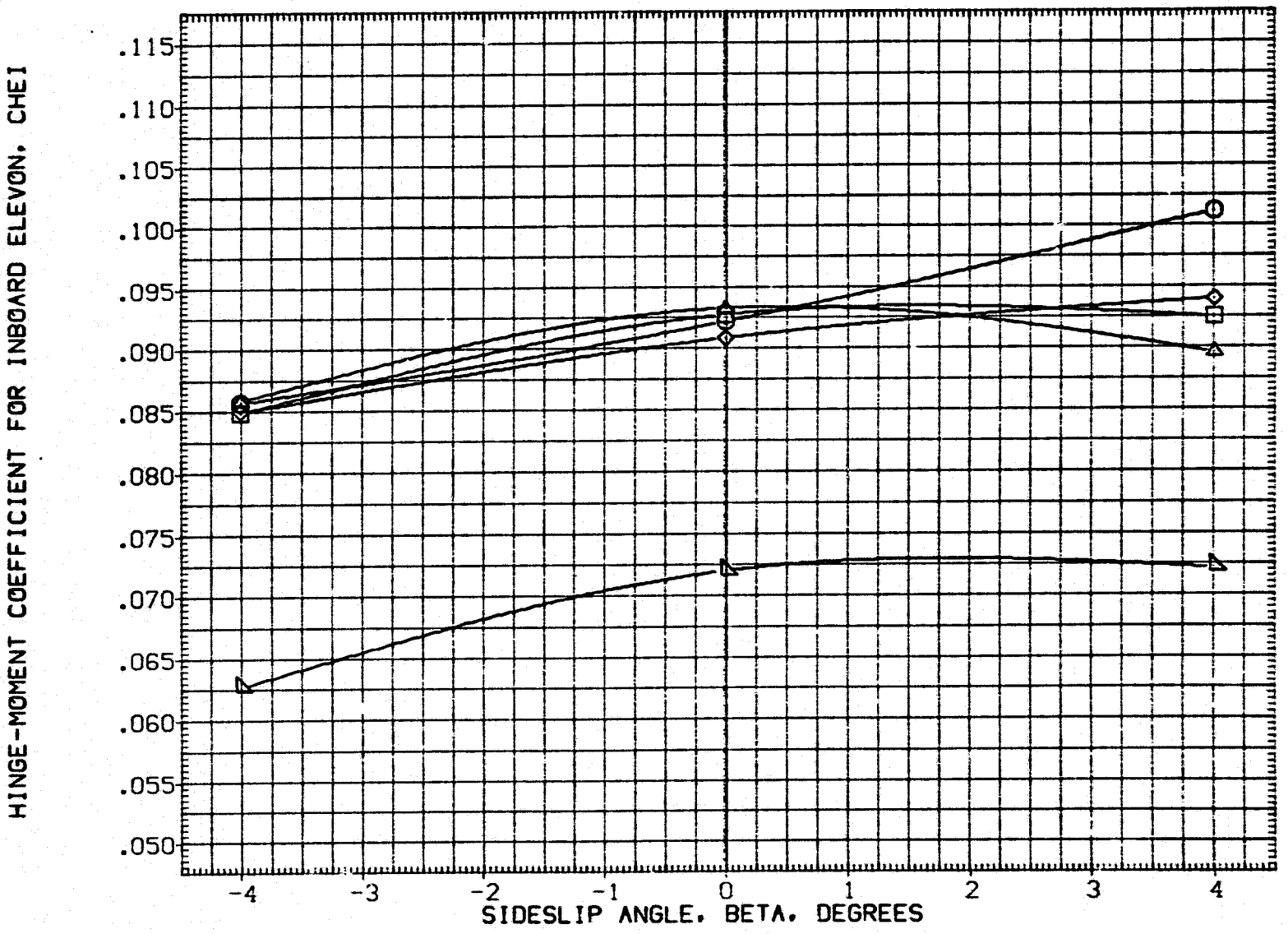



FIG. 93 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y24) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y19) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y15) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 1.400 | 4.250 |
| (RE4YB9) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 1.400 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

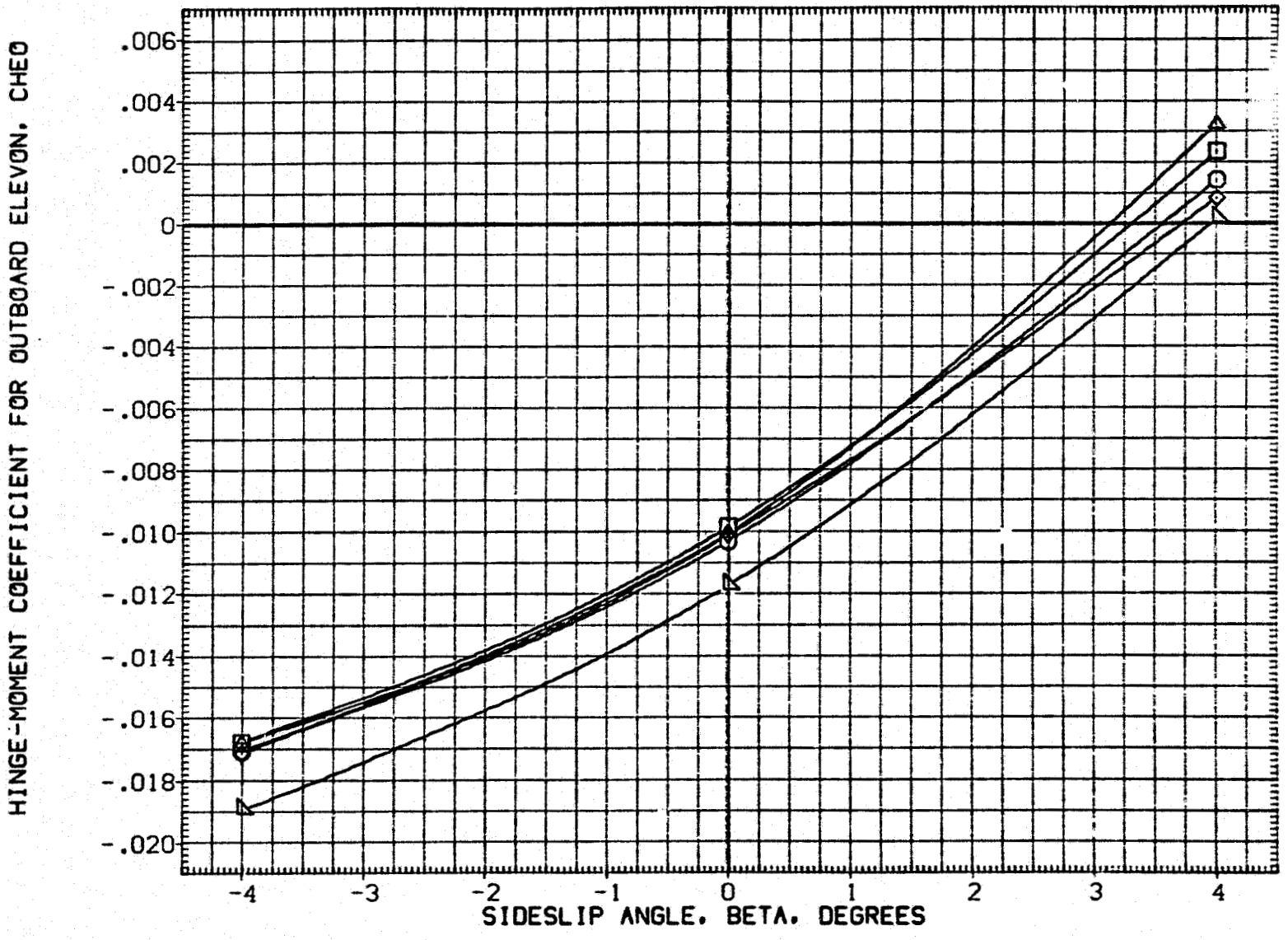



FIG. 93 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.4

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X41) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4X33) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

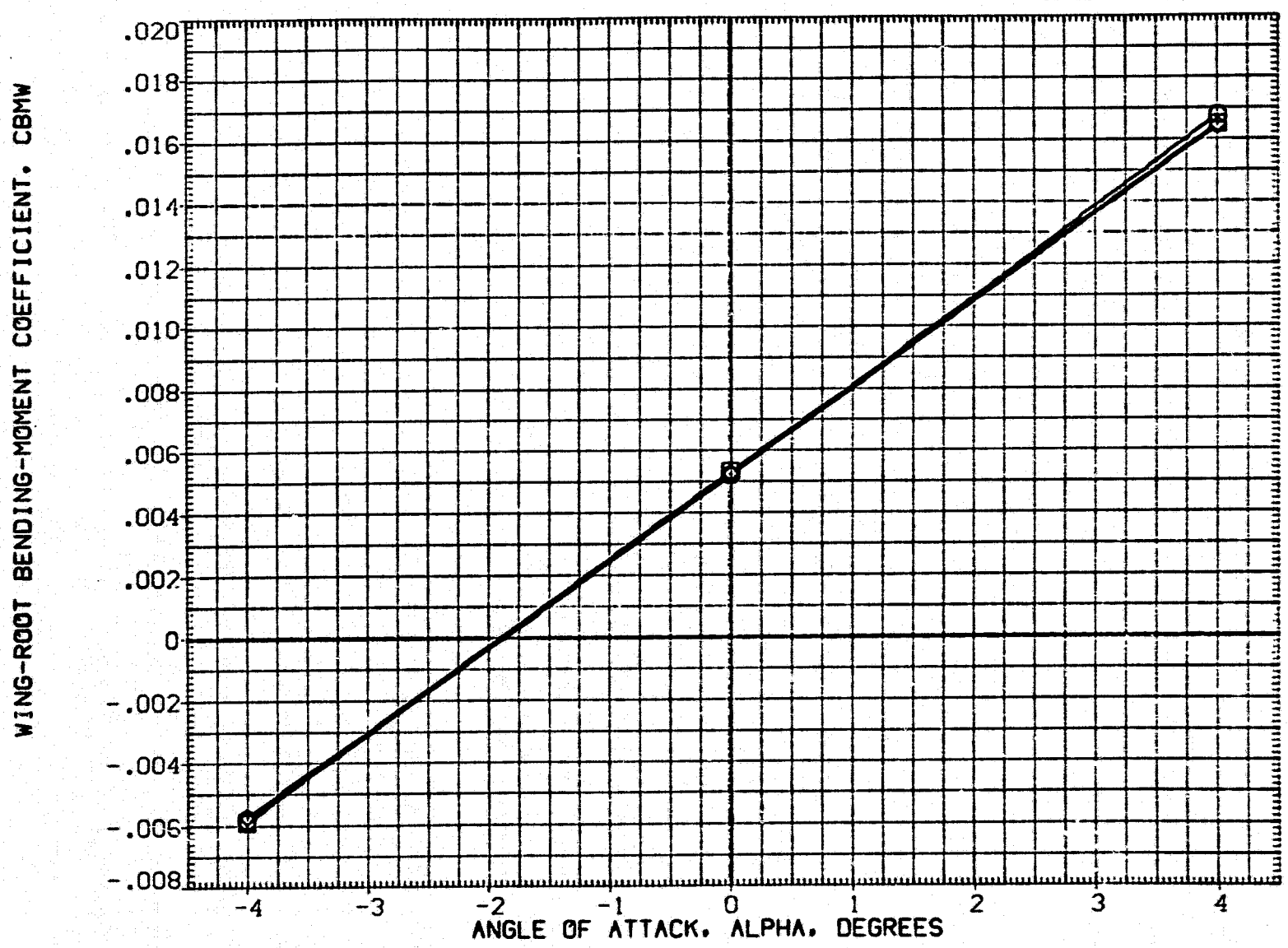



FIG. 94 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X41) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4X33) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

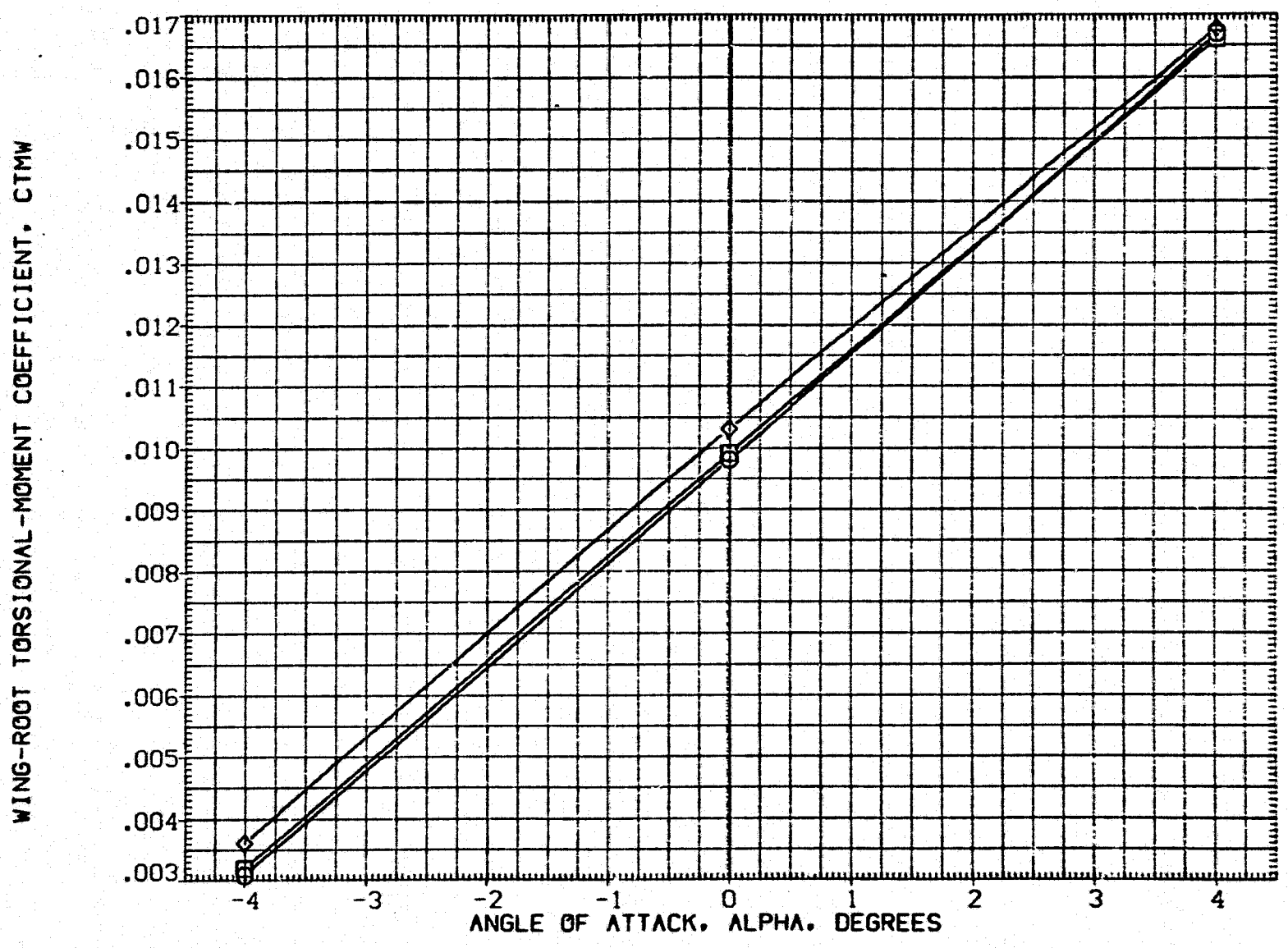



FIG. 94 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X41) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4X33) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

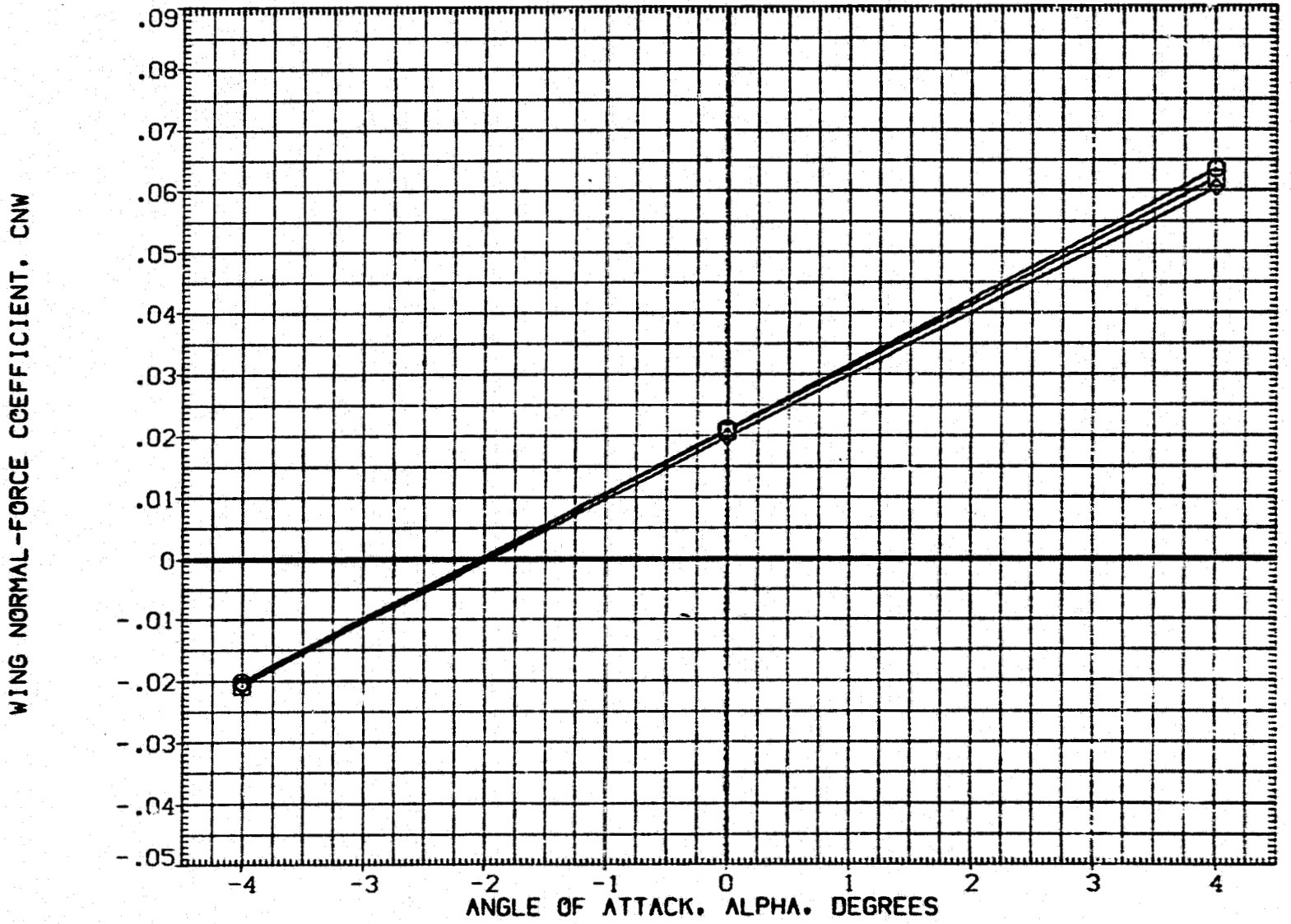



FIG. 94 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X28) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X41) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4X33) ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

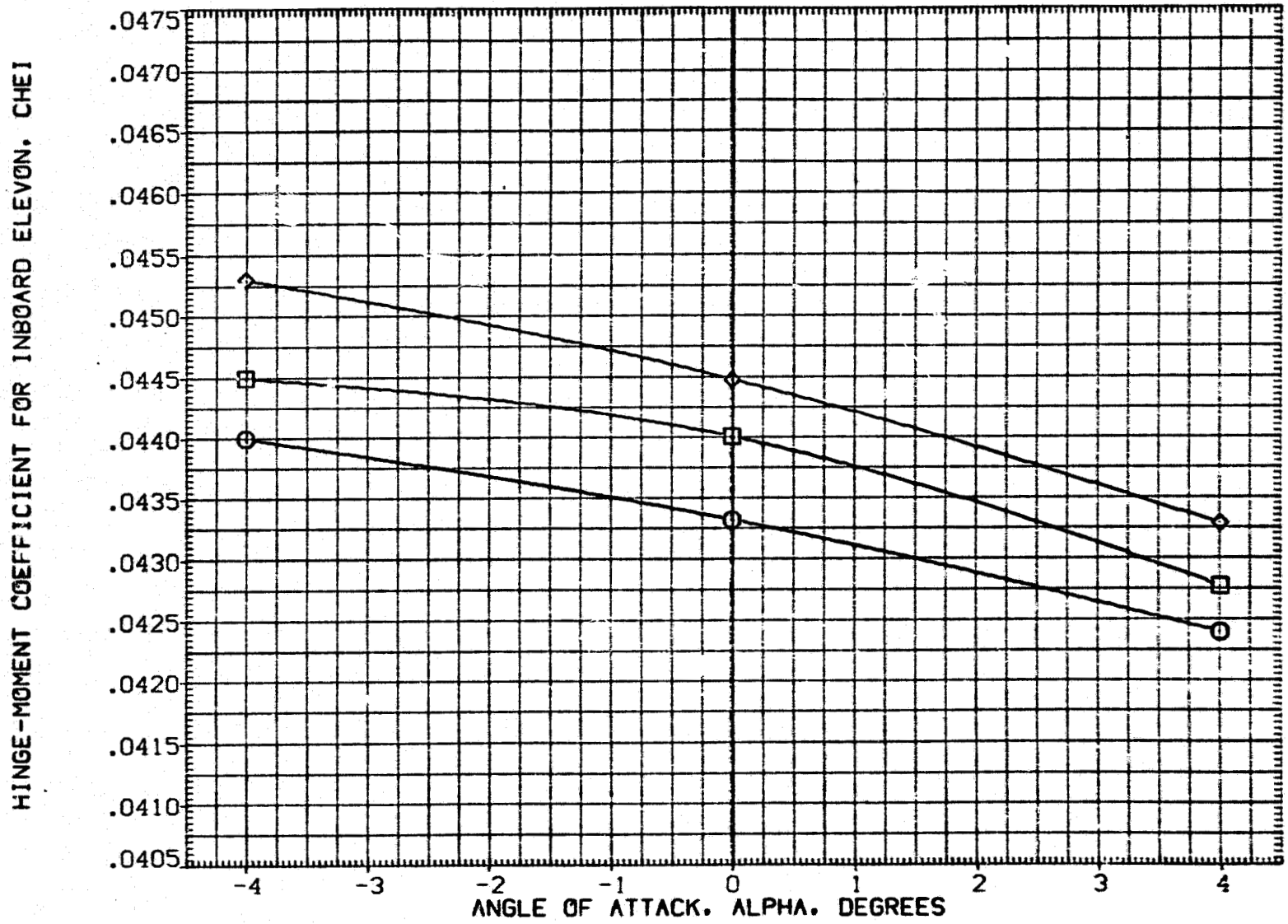



FIG. 94 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X28) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4X41) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4X33) ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

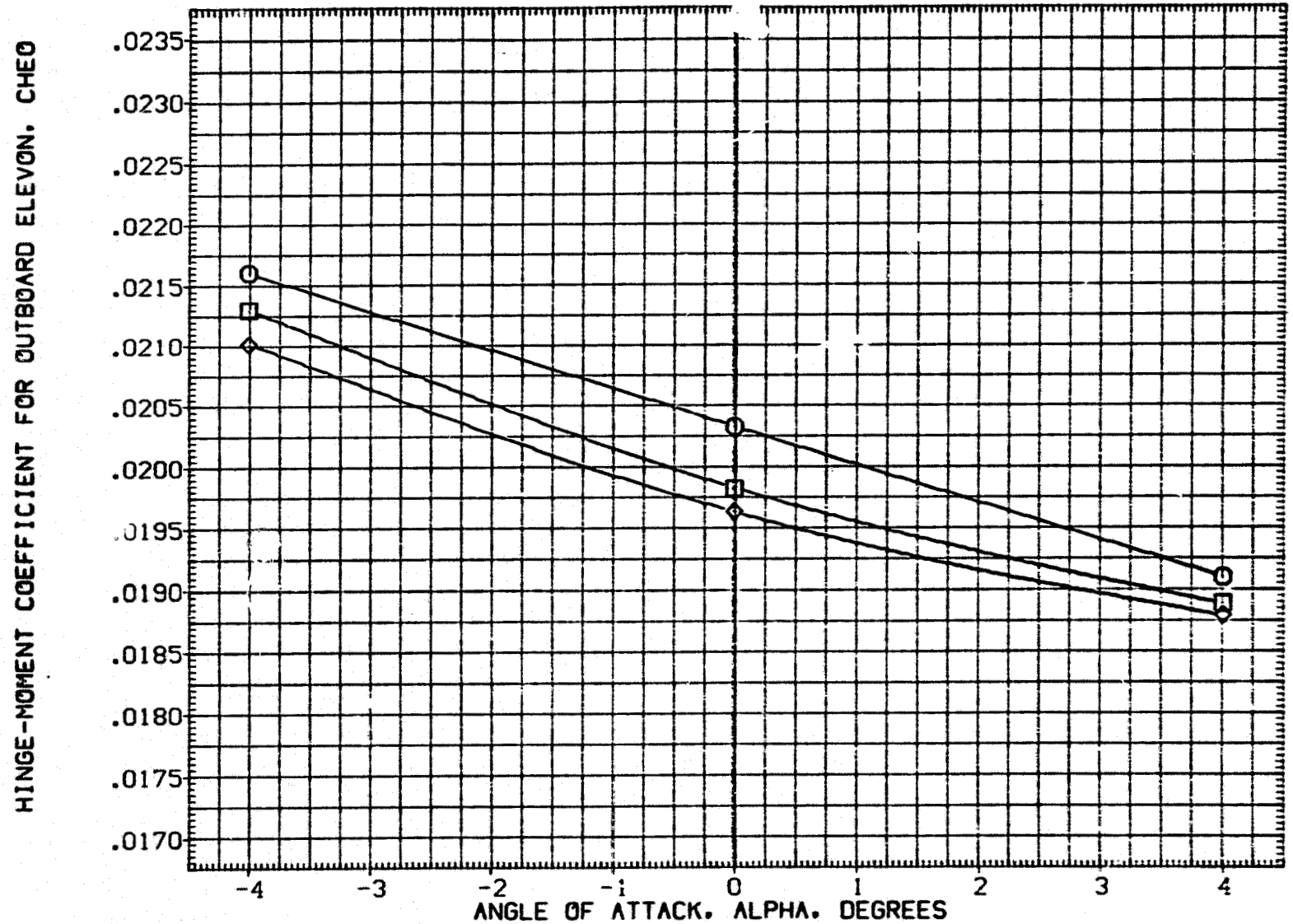



FIG. 94 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES OFF

ADBETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ▢ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .500 | 4.250 |
| (RE4X42) | ▢ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4X34) | ◇ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

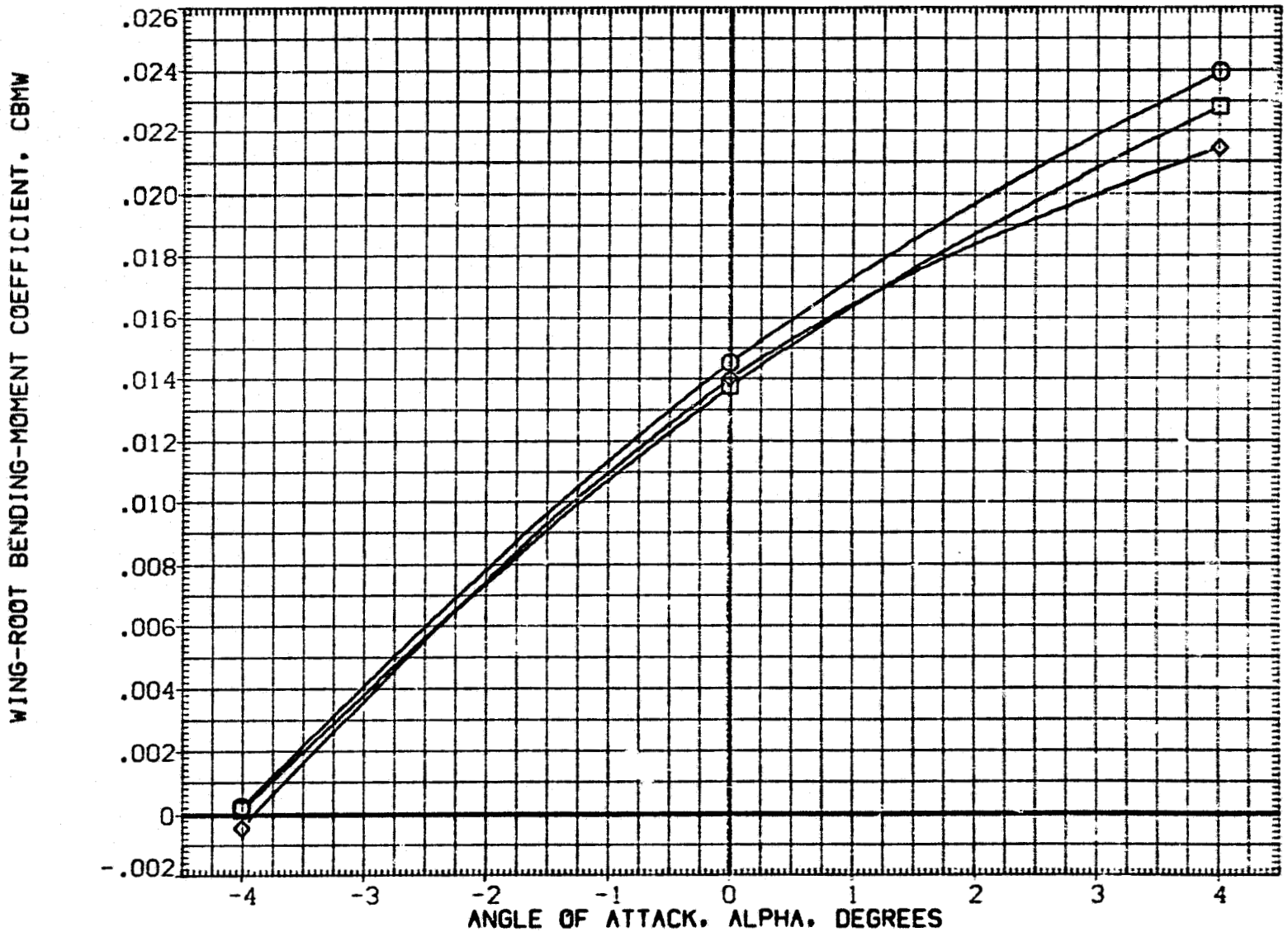



FIG. 95 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X42) | ⊏□ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4X34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

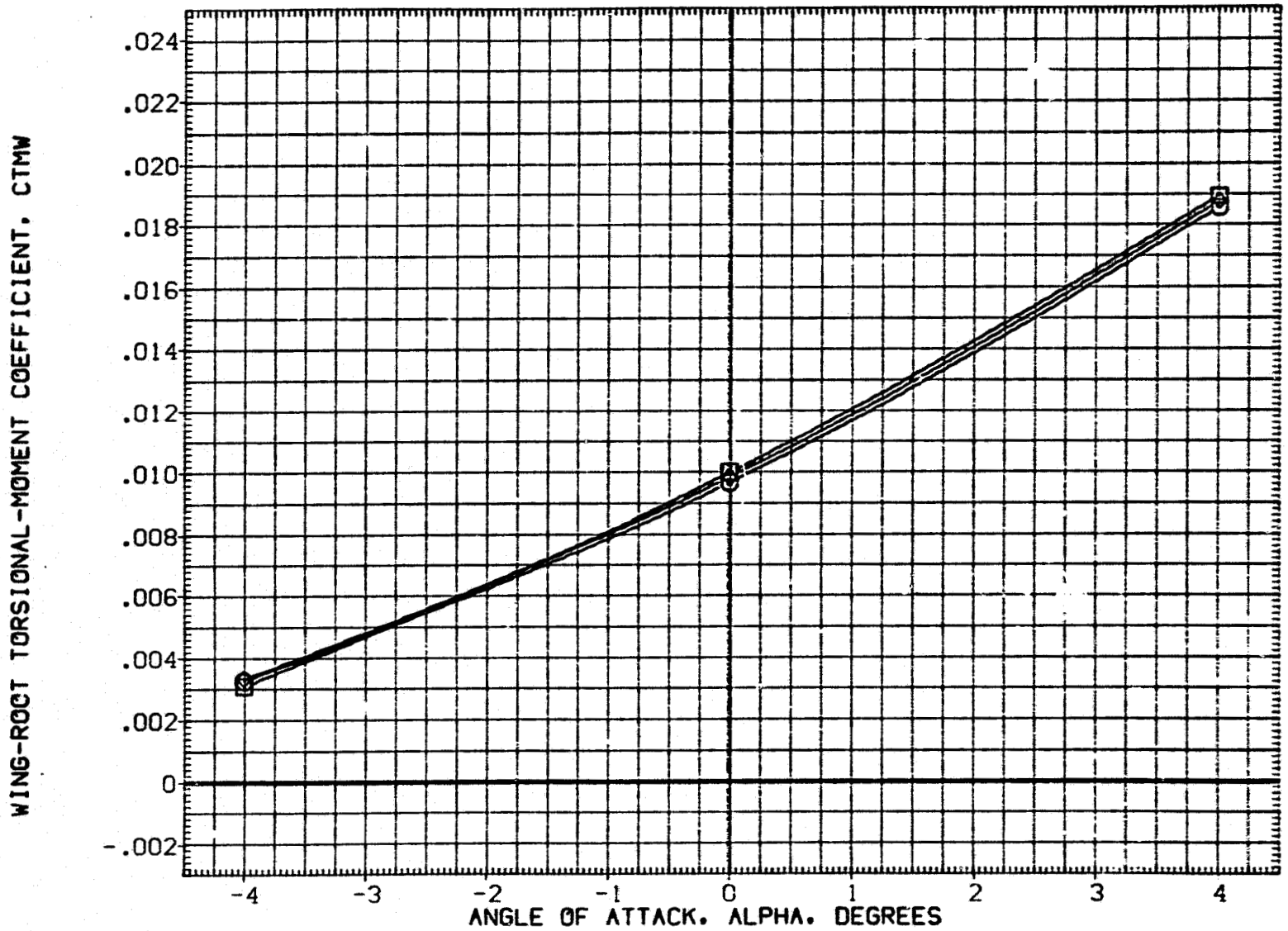



FIG. 95 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X42) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4X34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

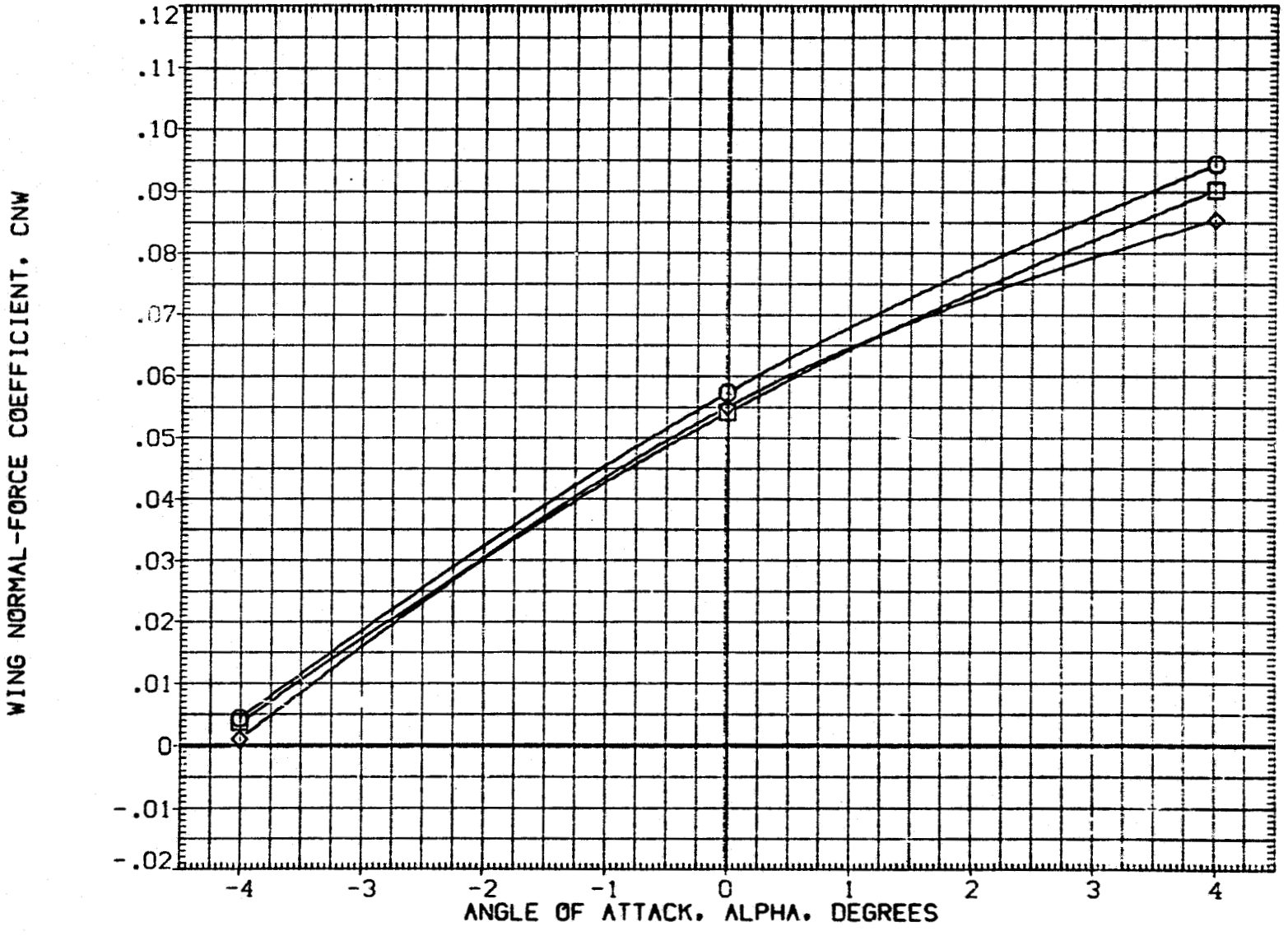



FIG. 95 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X29) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X42) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4X34) ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

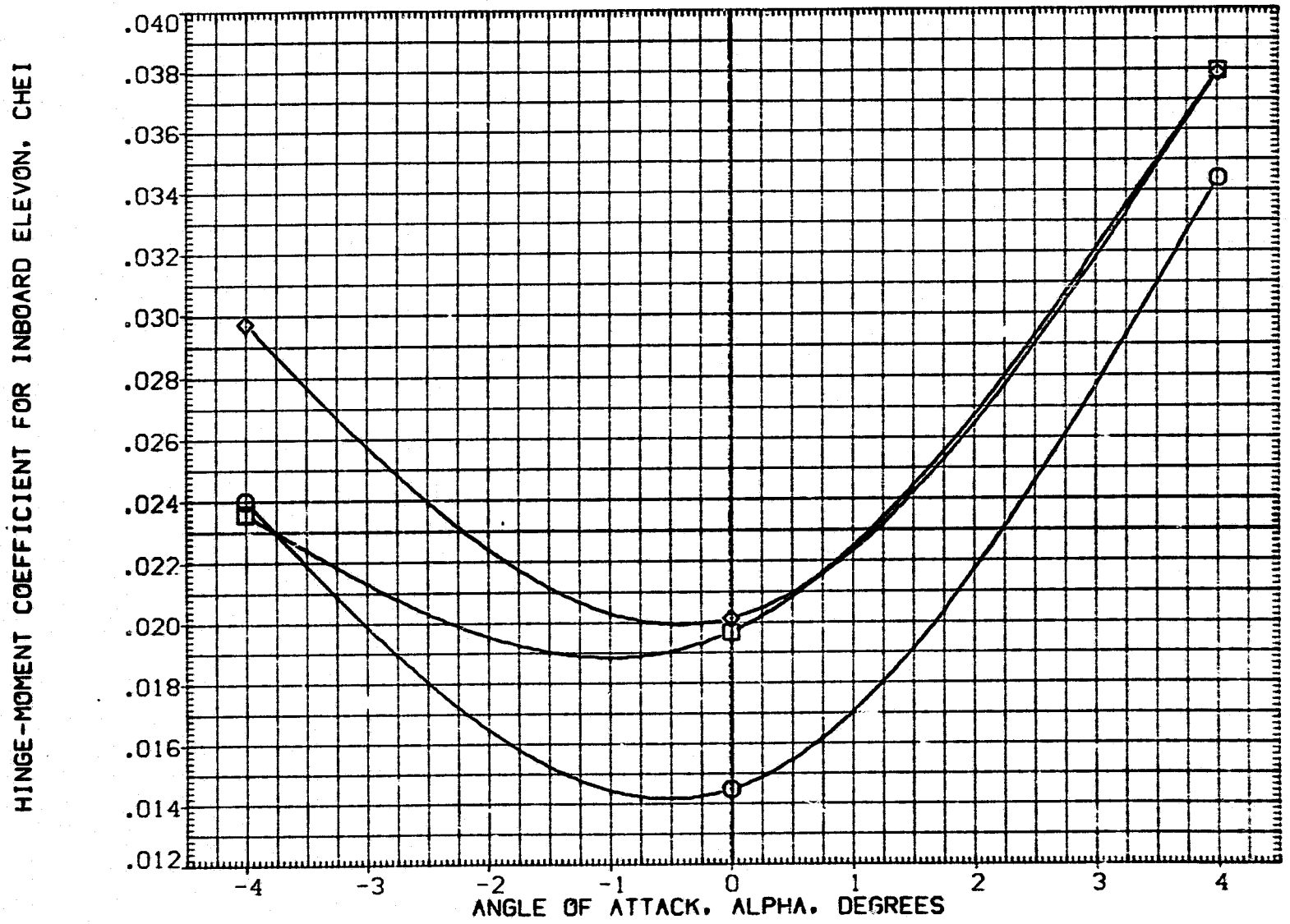



FIG. 95 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4X42) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4X34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

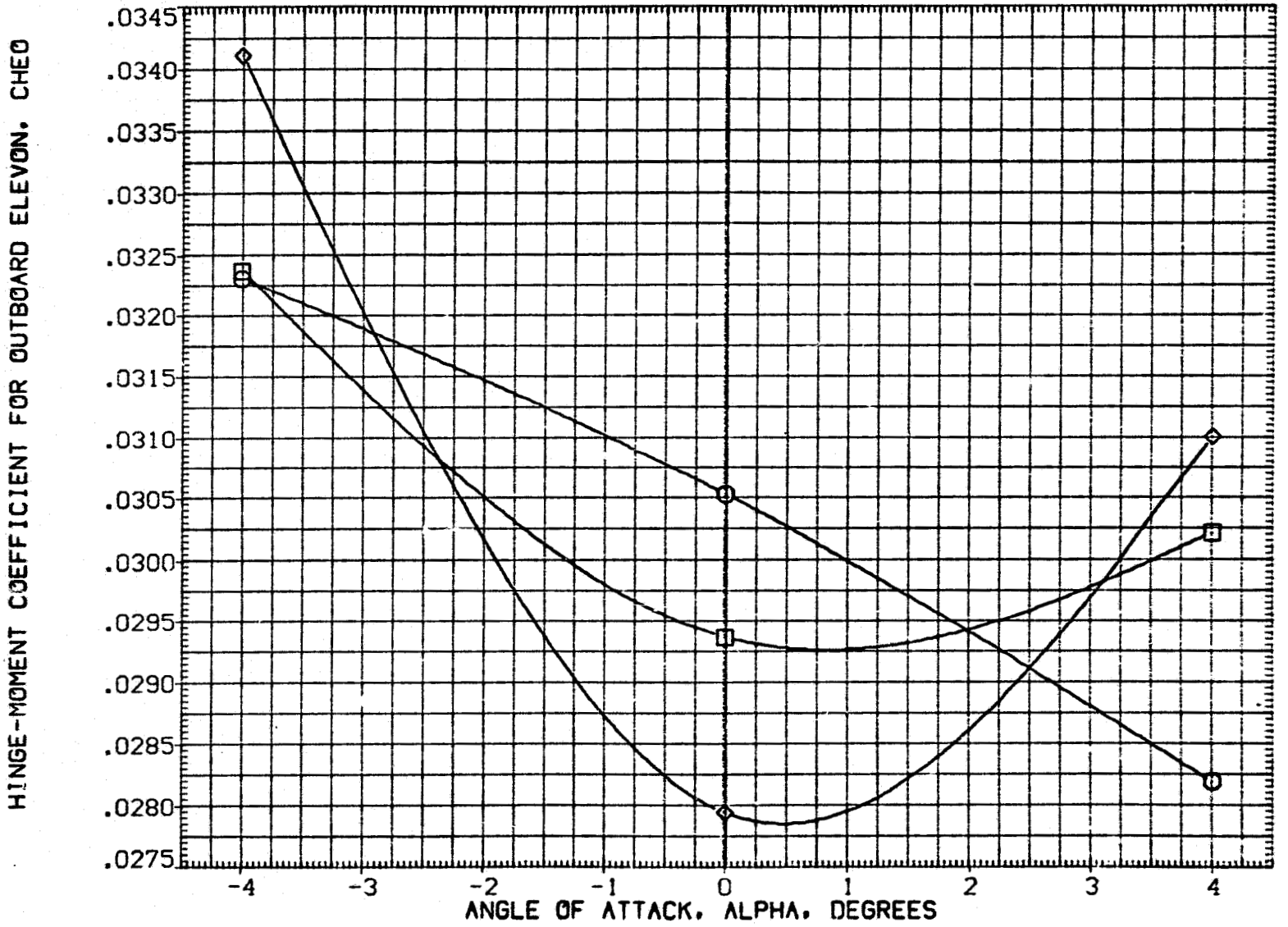



FIG. 95 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=).9 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X43) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4X35) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

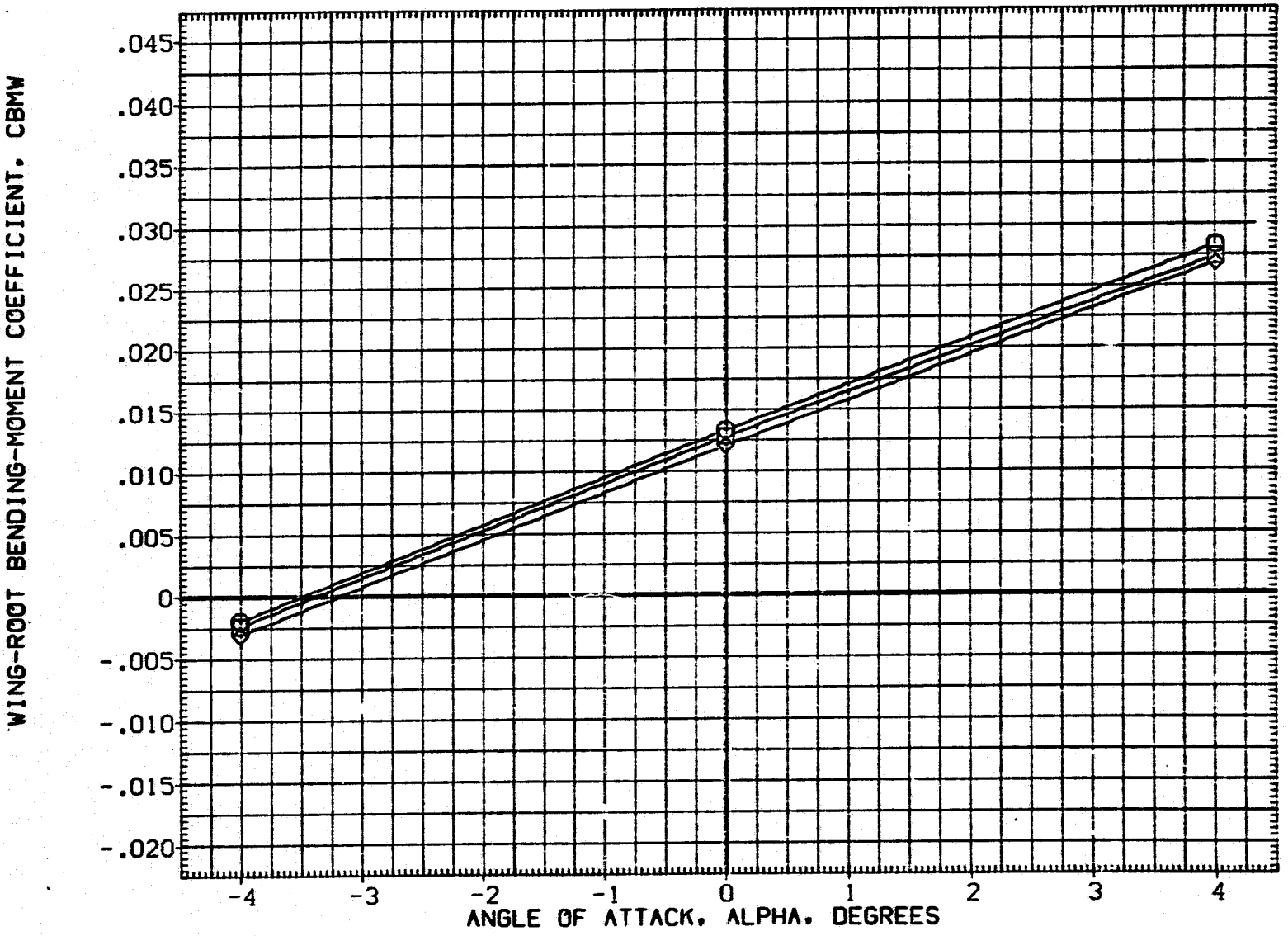



FIG. 96 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X43) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4X35) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | |
| SCALE | .0200 | |

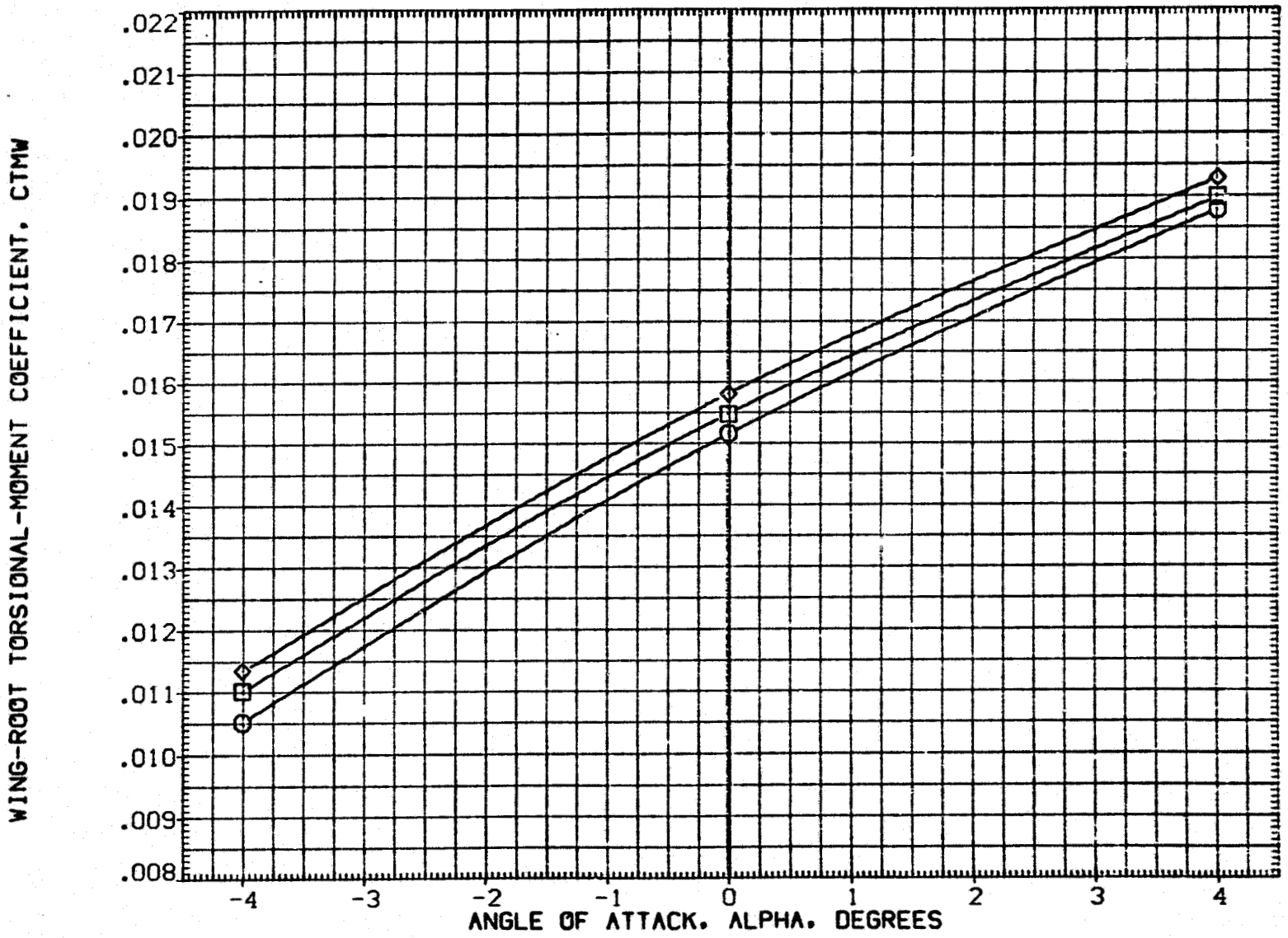



FIG. 96 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X43) | ⊏ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4X35) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

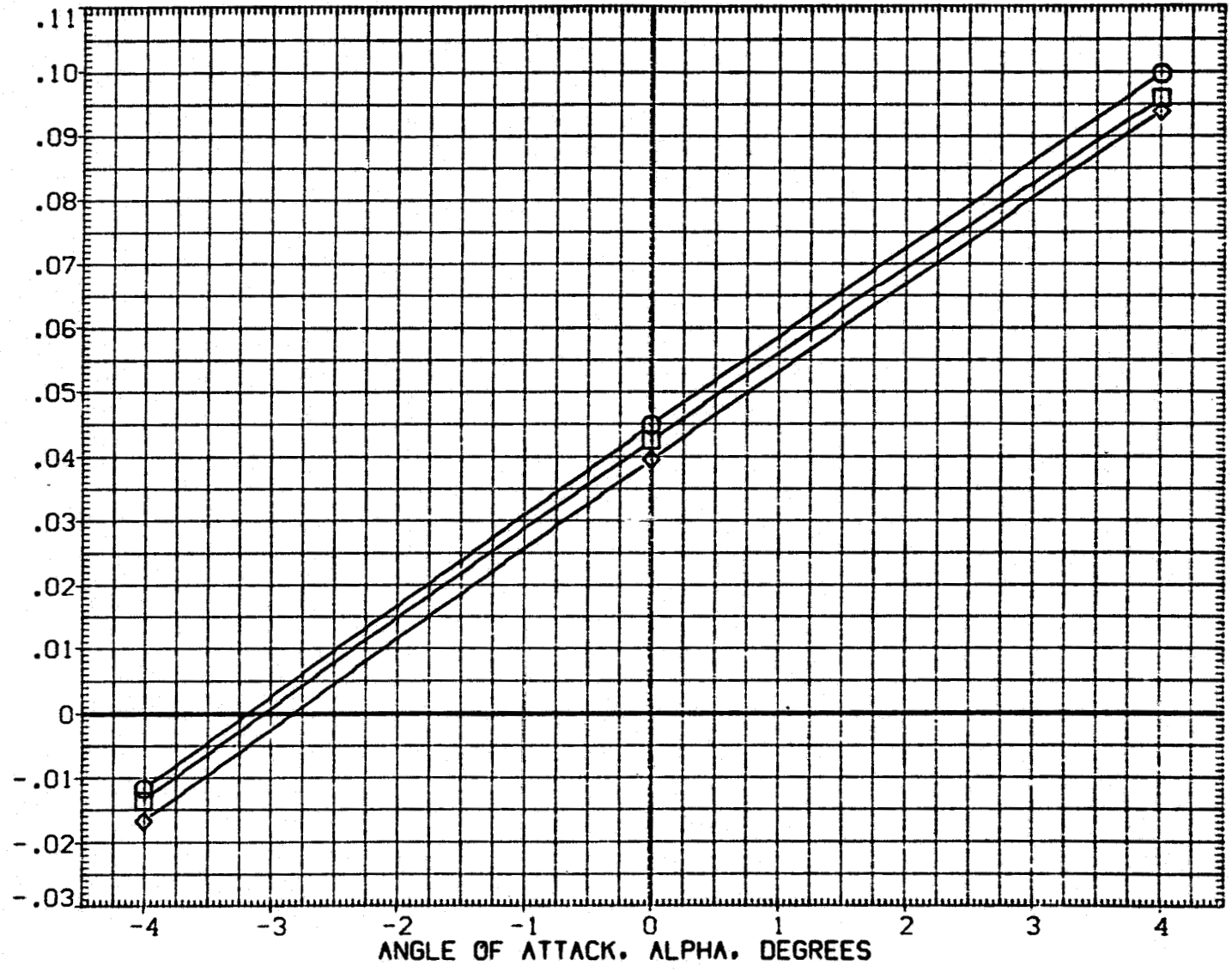



FIG. 96 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X43) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4X35) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

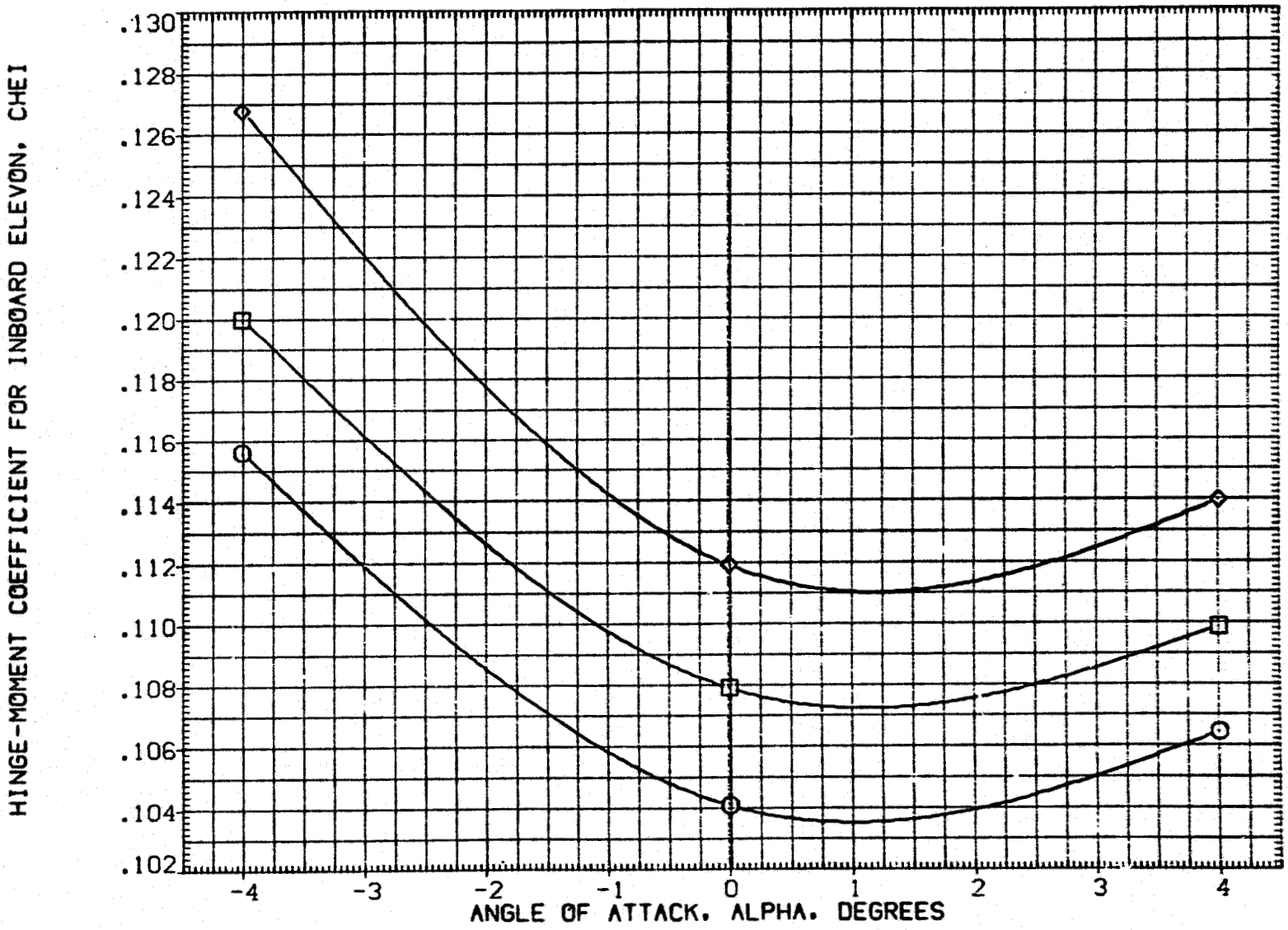



FIG. 96 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X36) | ◻ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X43) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4X35) | ◁ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

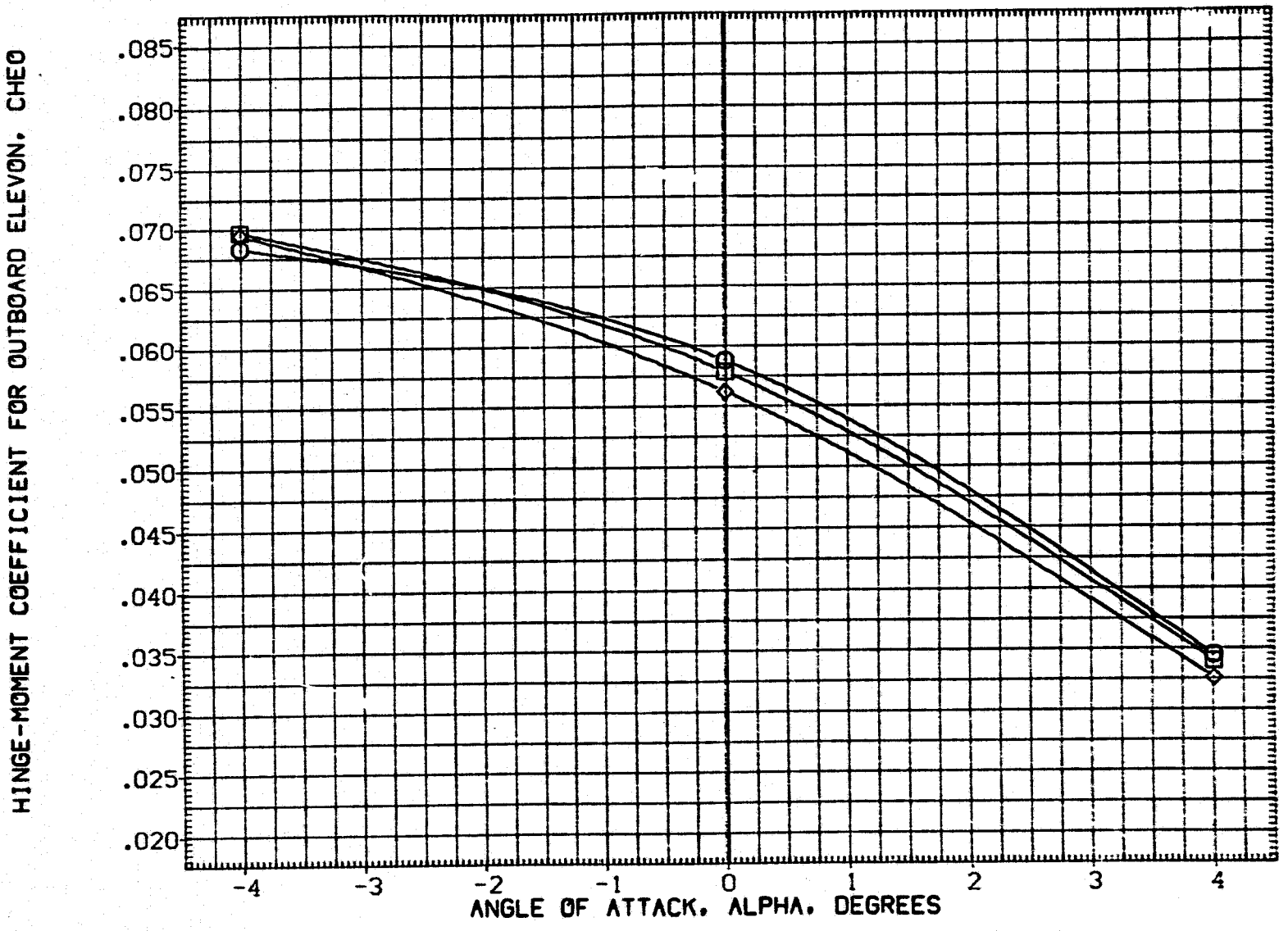



FIG. 96 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X31) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X44) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4X36) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

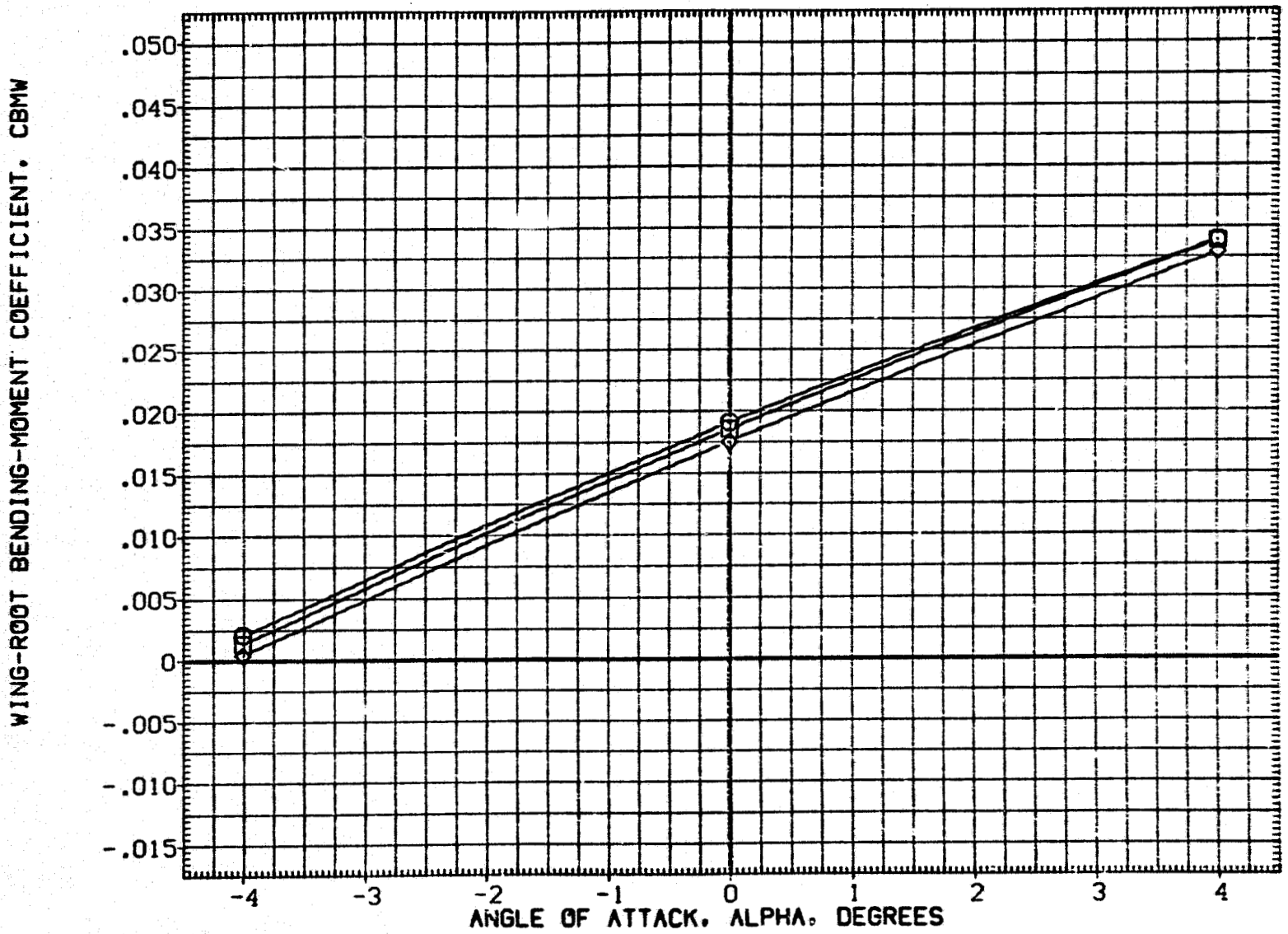



FIG. 97 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X31) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X44) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4X36) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

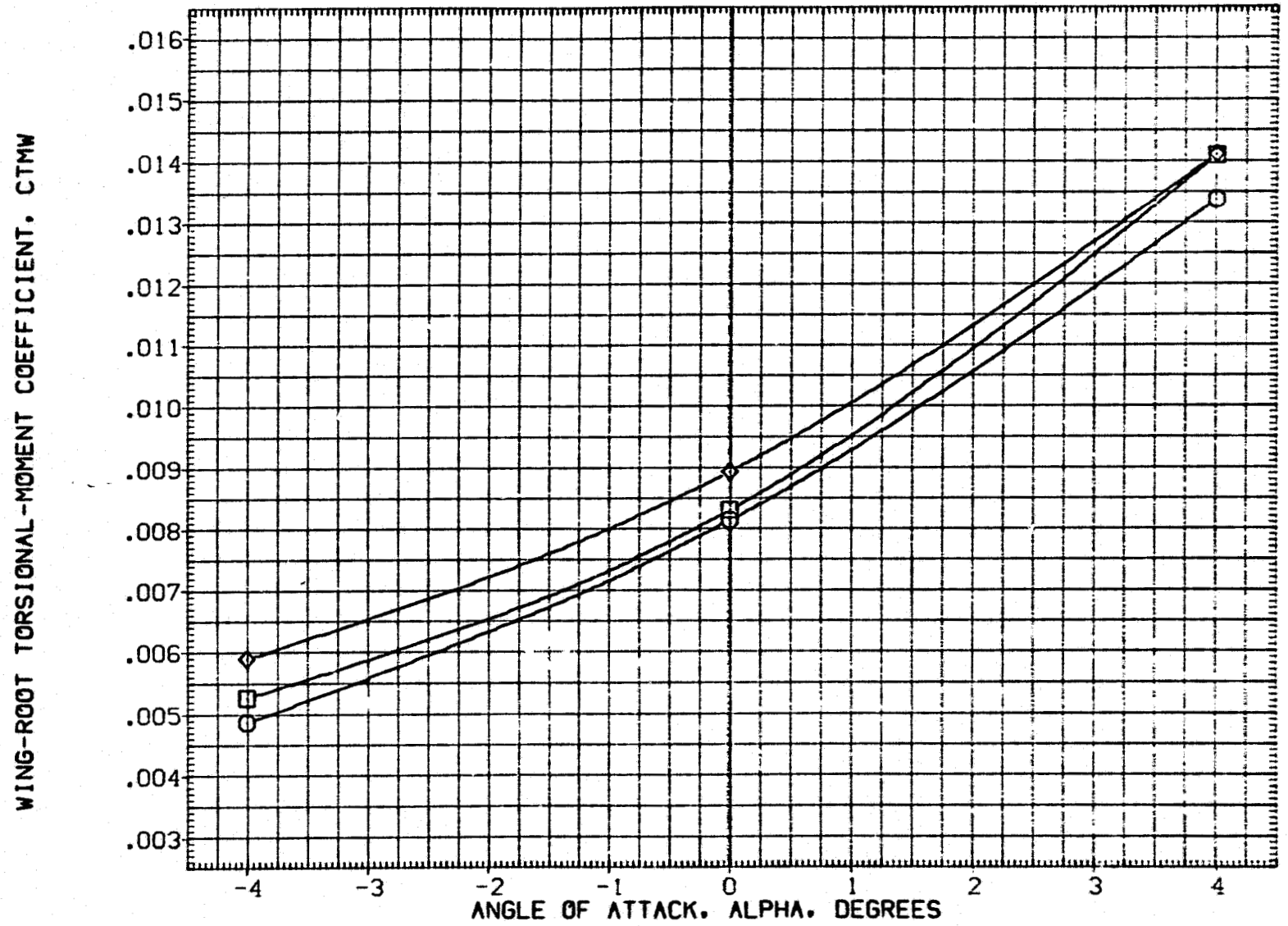



FIG. 97 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X44) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4X36) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

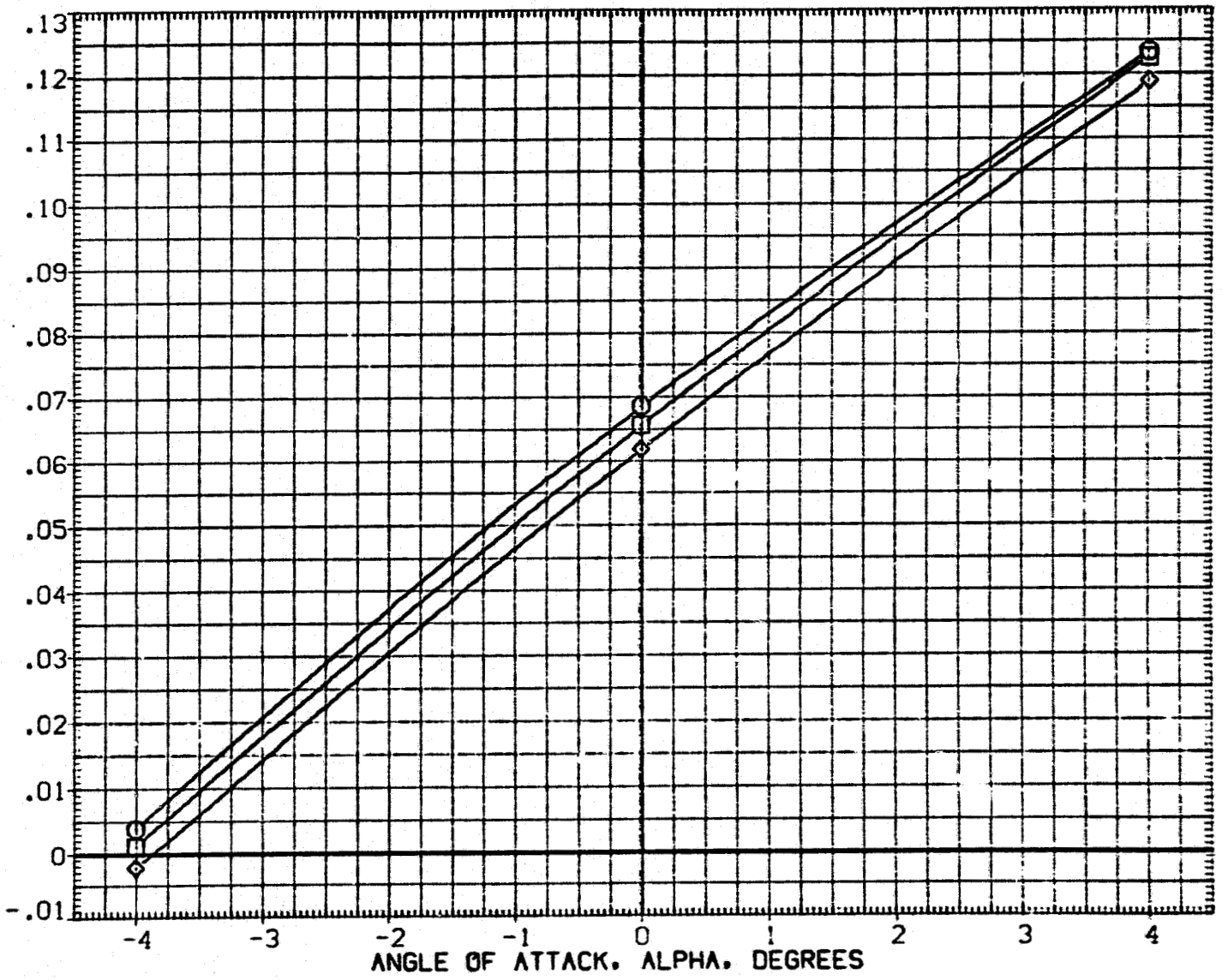



FIG. 97 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 0TS (SRB 0FF ) (SSME 0FF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X44) | □ | ARC 11-023 IA80 0TS (SRB 0FF ) (SSME 0FF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4X36) | ◇ | ARC 11-023 IA80 0TS (SRB 0FF ) (SSME 0FF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

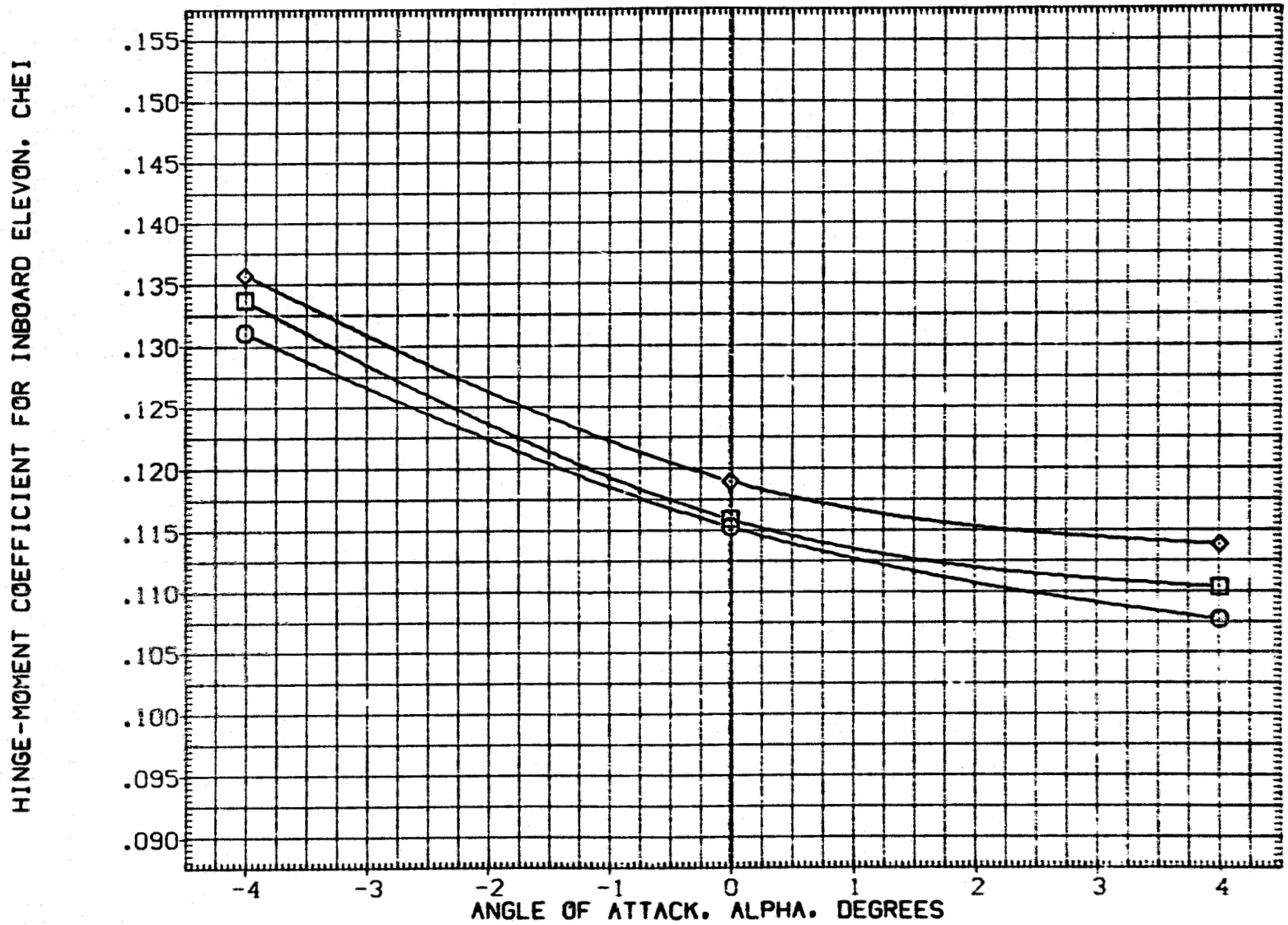



FIG. 97 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4X44) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4X36) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

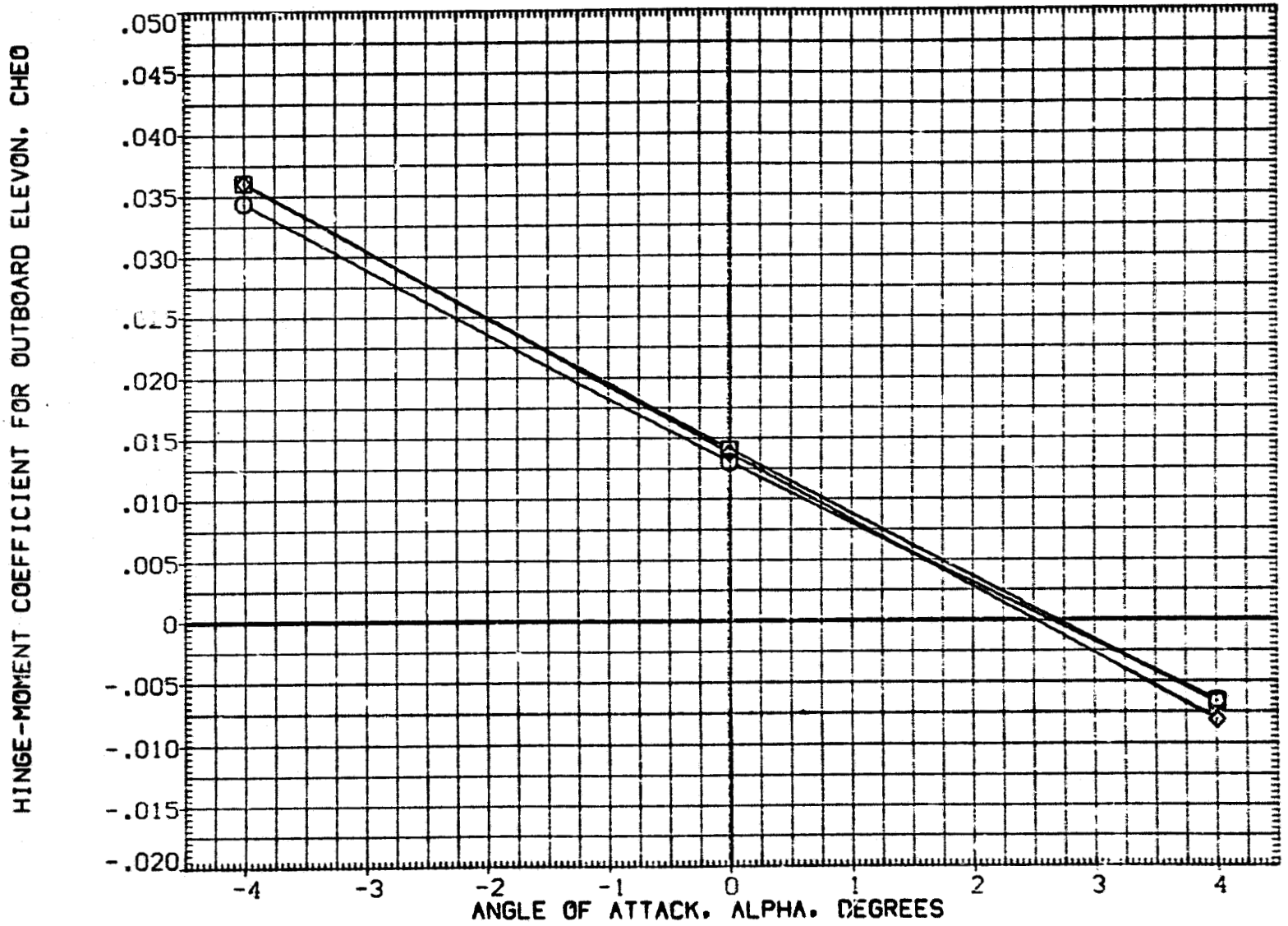



FIG. 97 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.25 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X45) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4X37) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

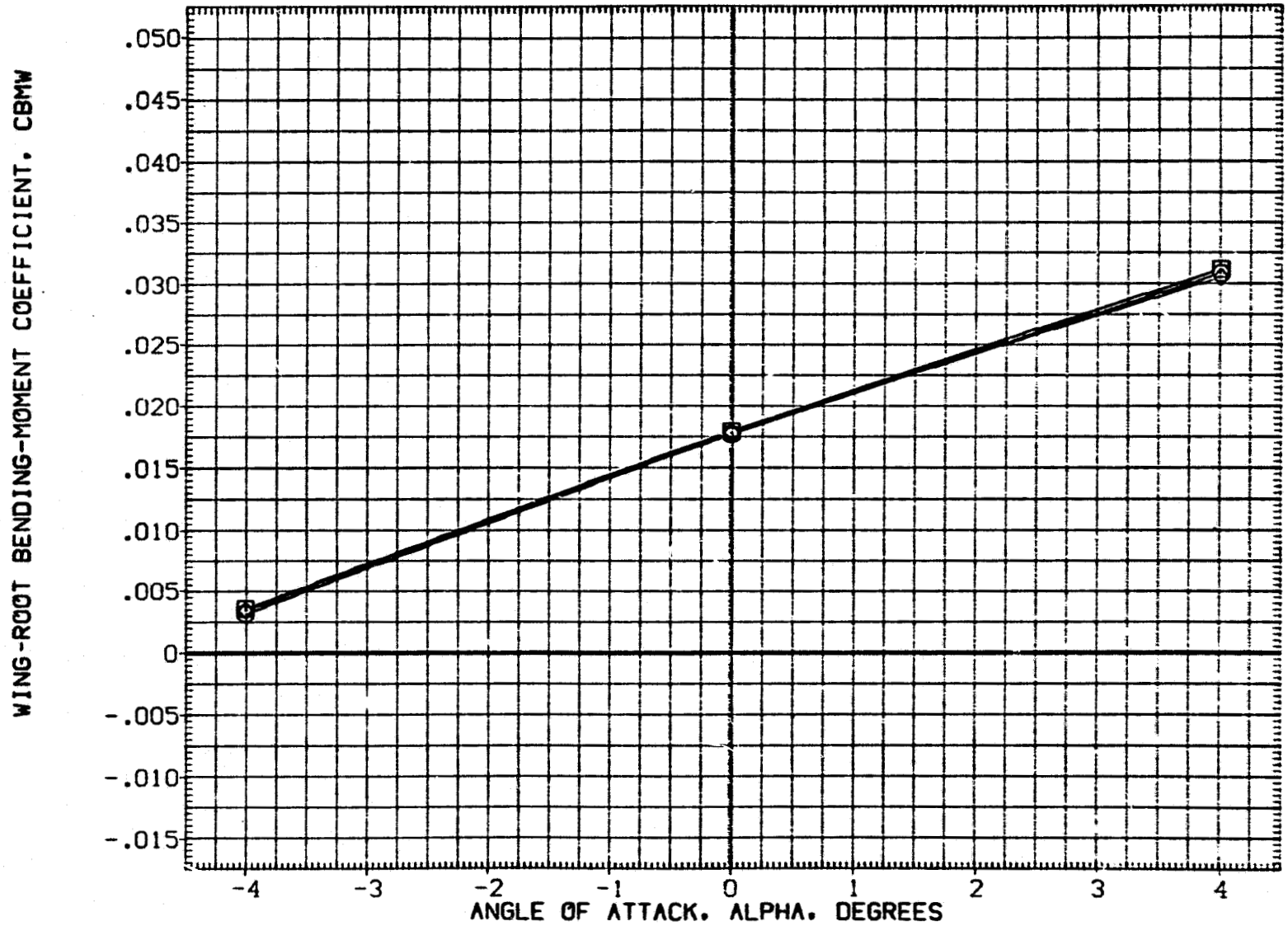



FIG. 98 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X45) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4X37) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

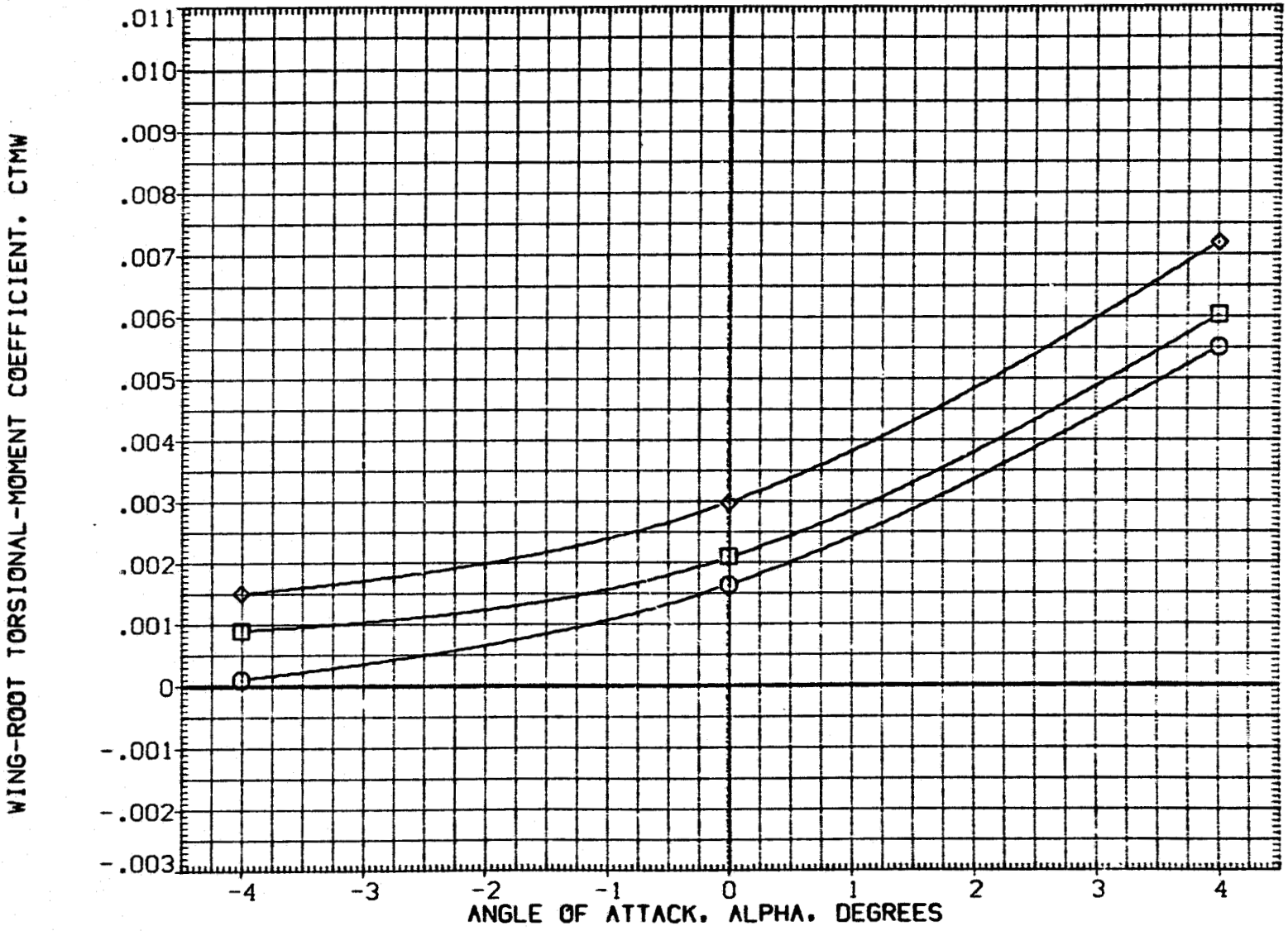



FIG. 98 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X45) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4X37) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

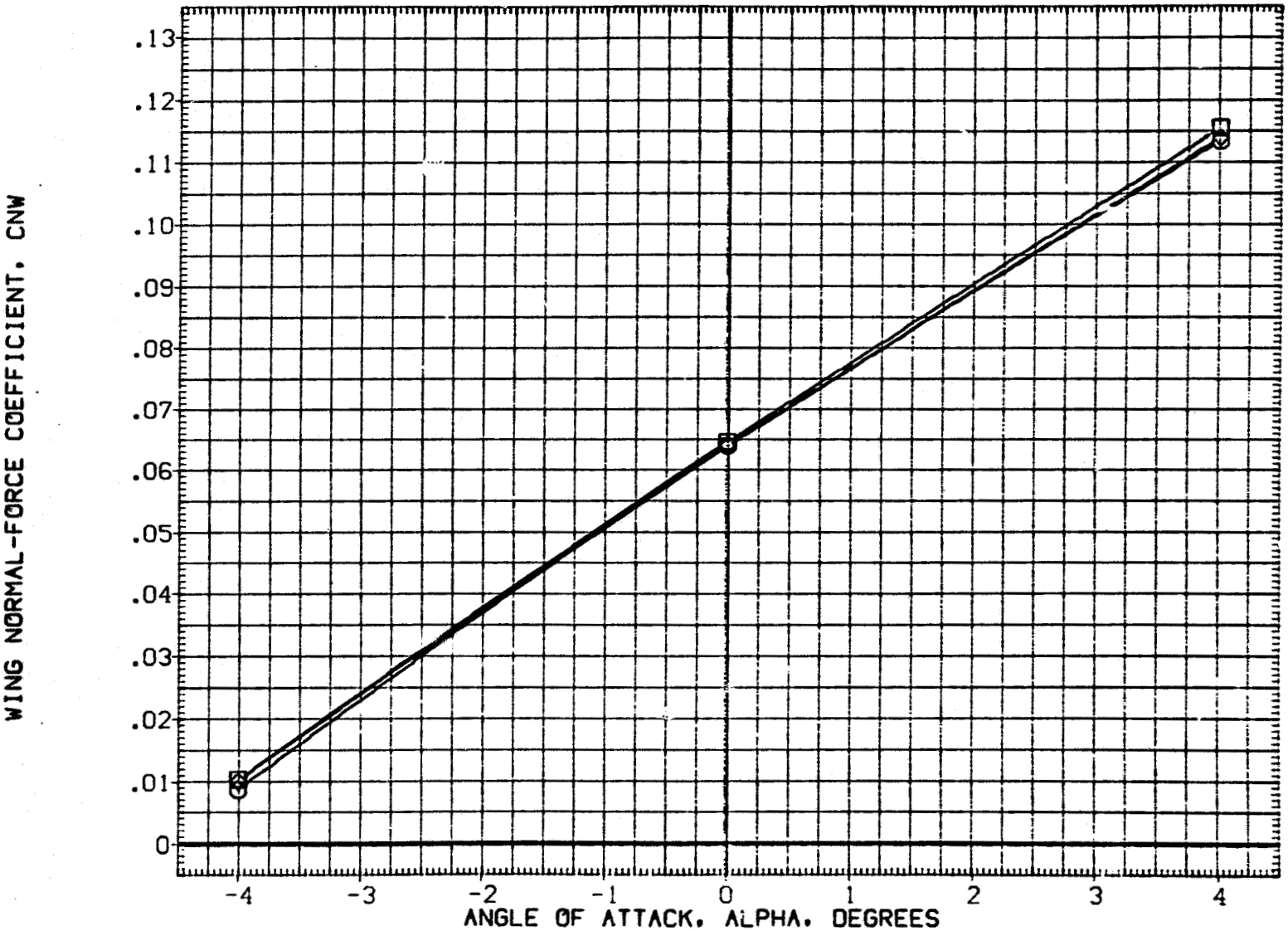



FIG. 98 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X45) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4X37) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

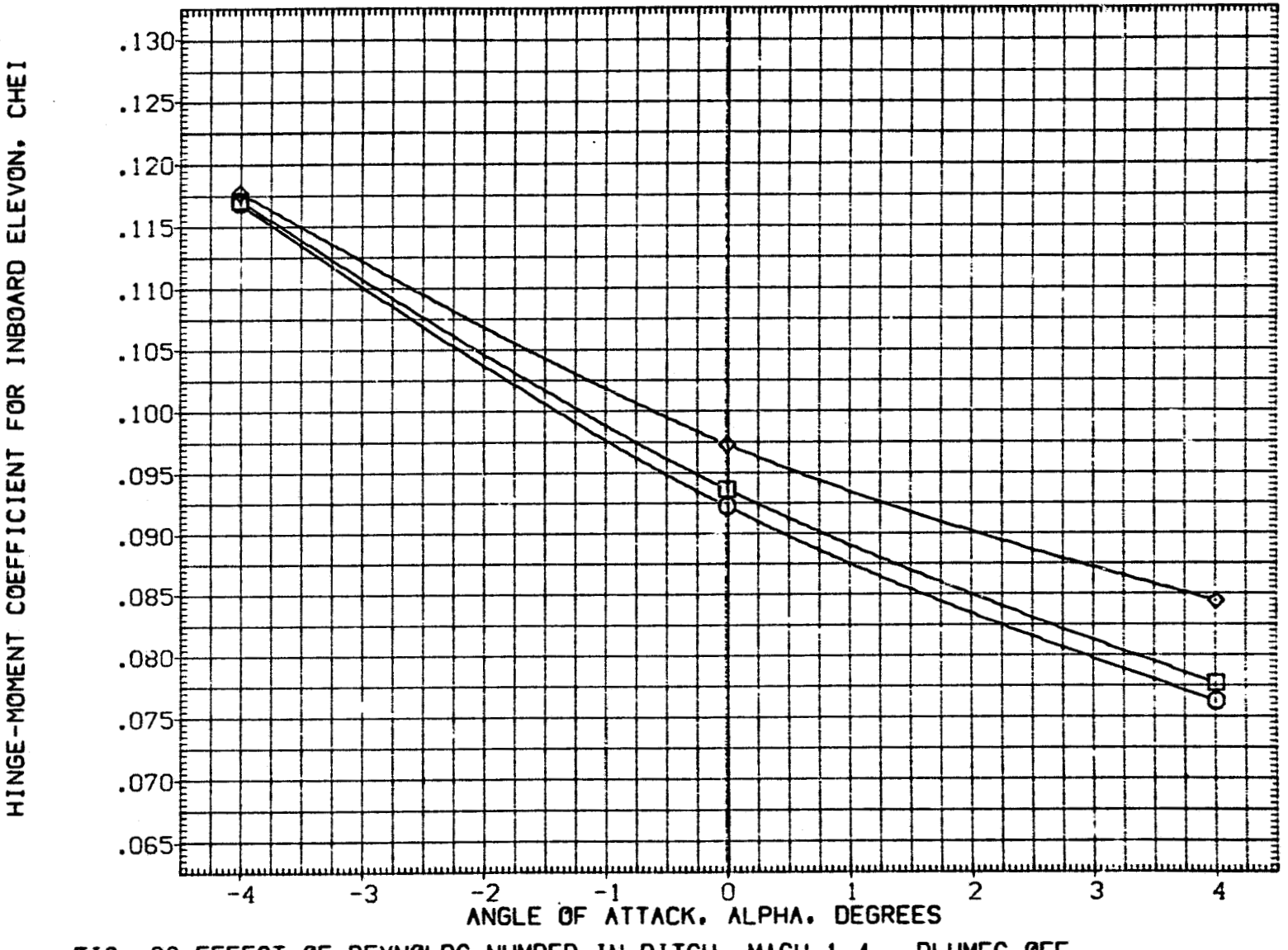



FIG. 98 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X32) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4X45) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4X37) ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

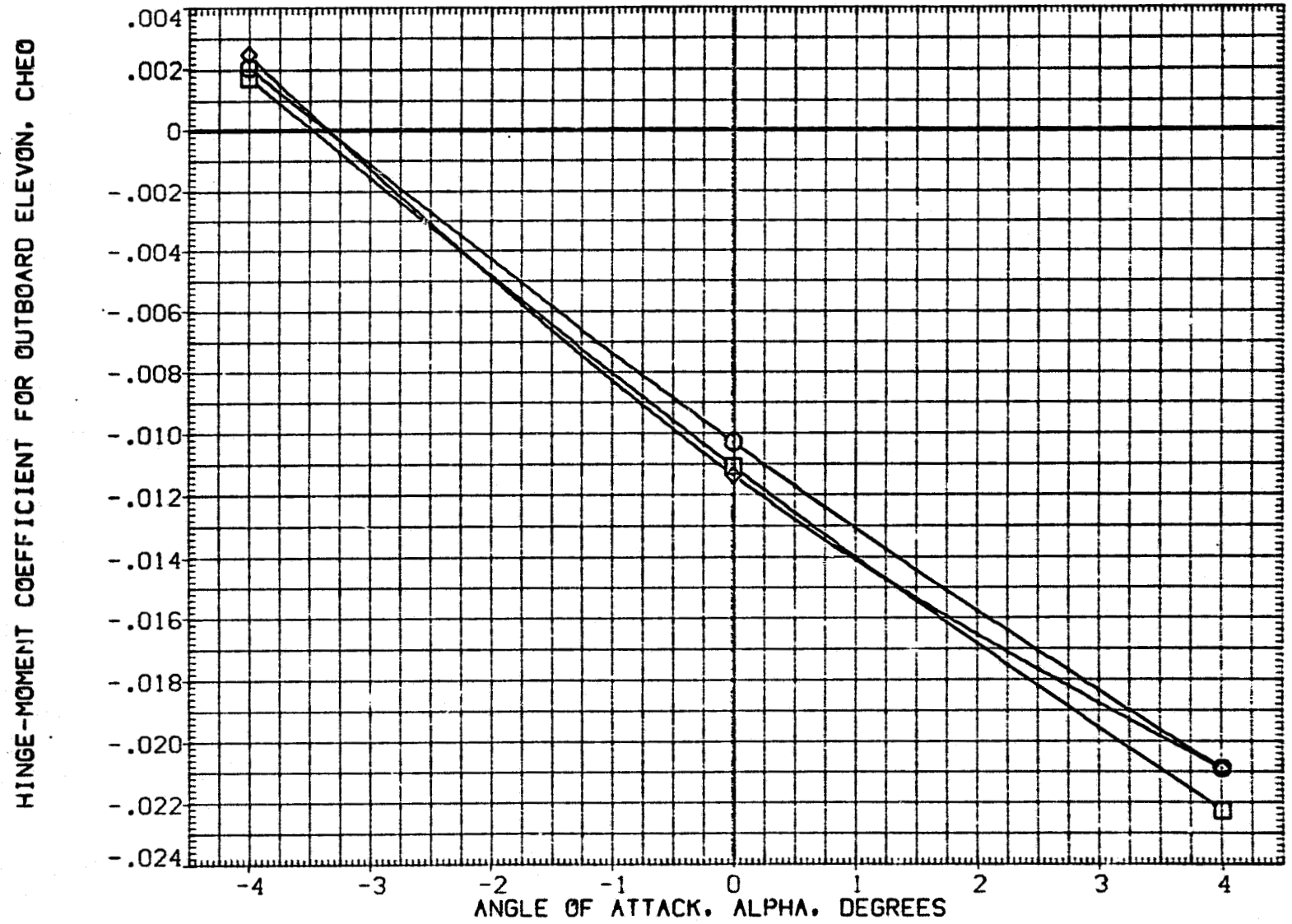



FIG. 98 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.4 PLUMES OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y41) | ◇□ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4Y33) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

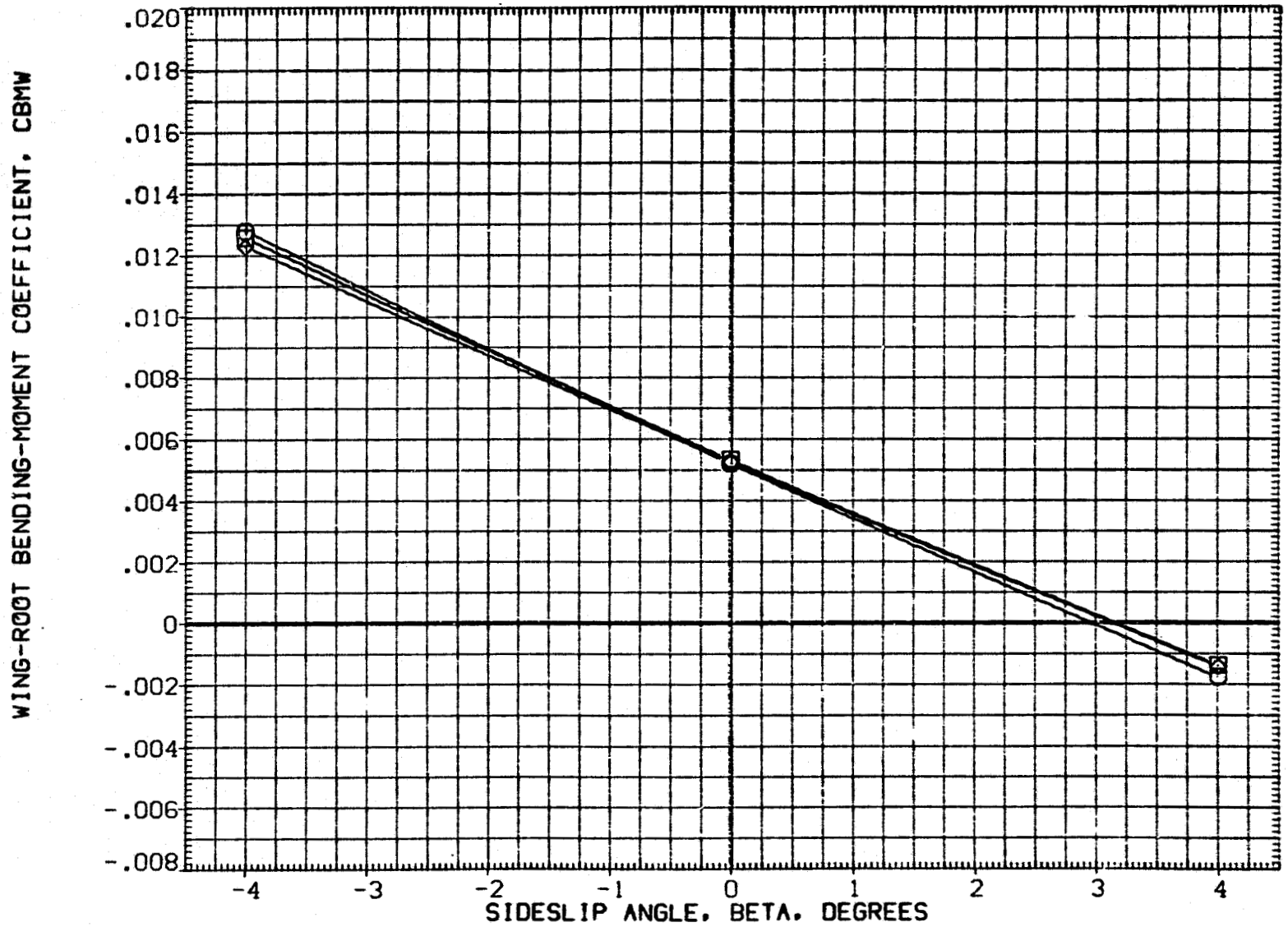



FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y41) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4Y33) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

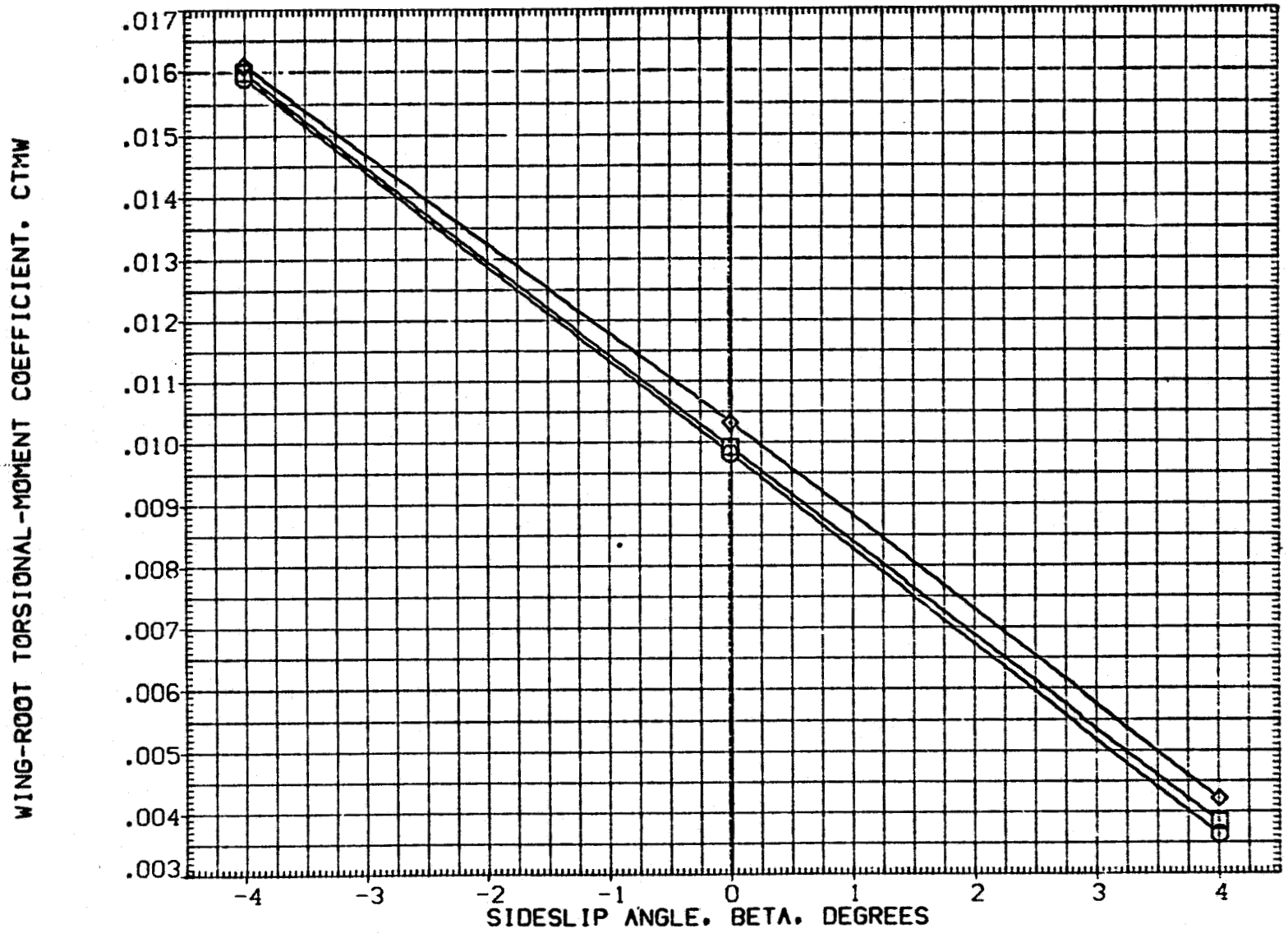



FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y41) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4Y33) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

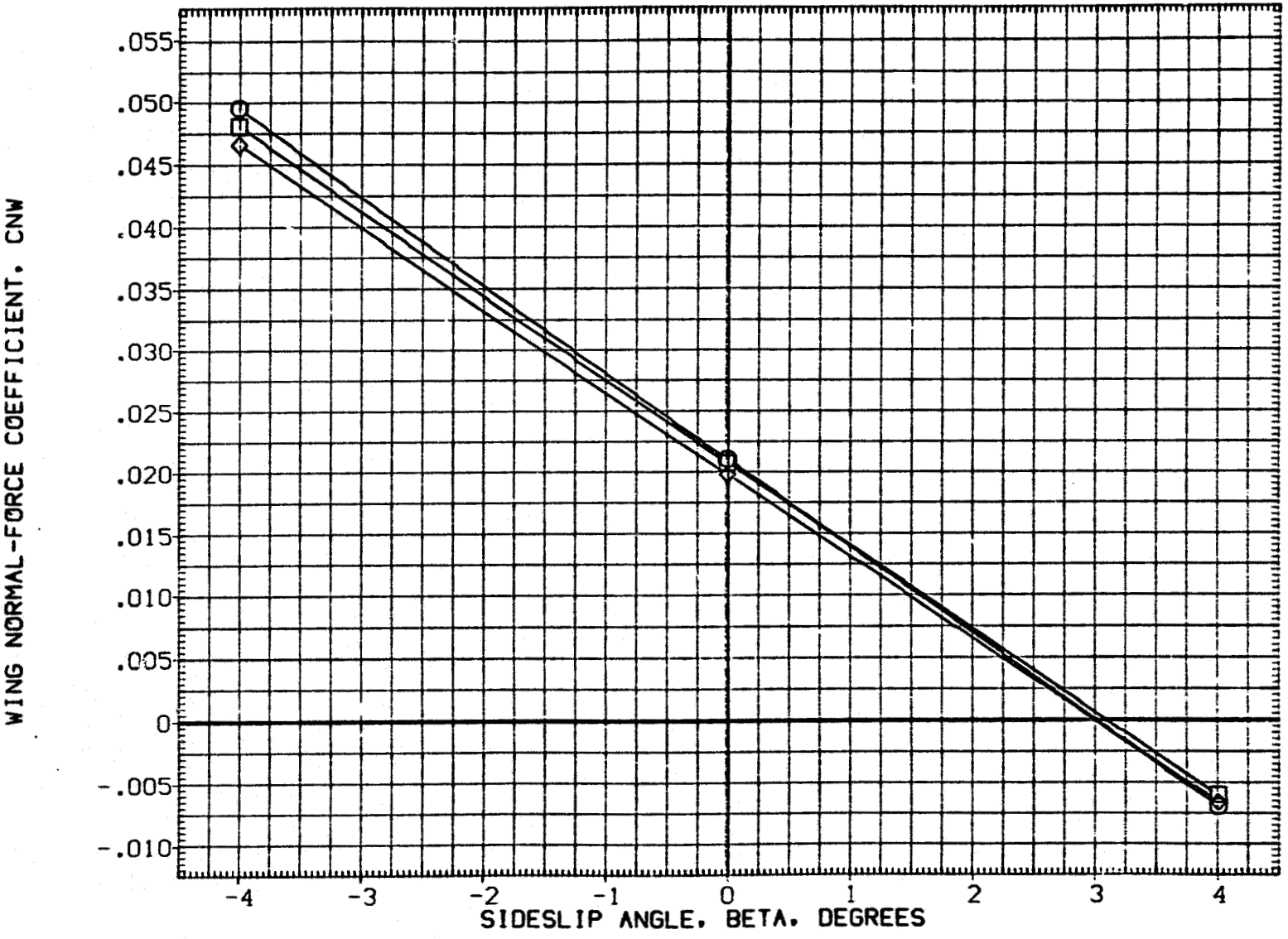



FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y41) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4Y33) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

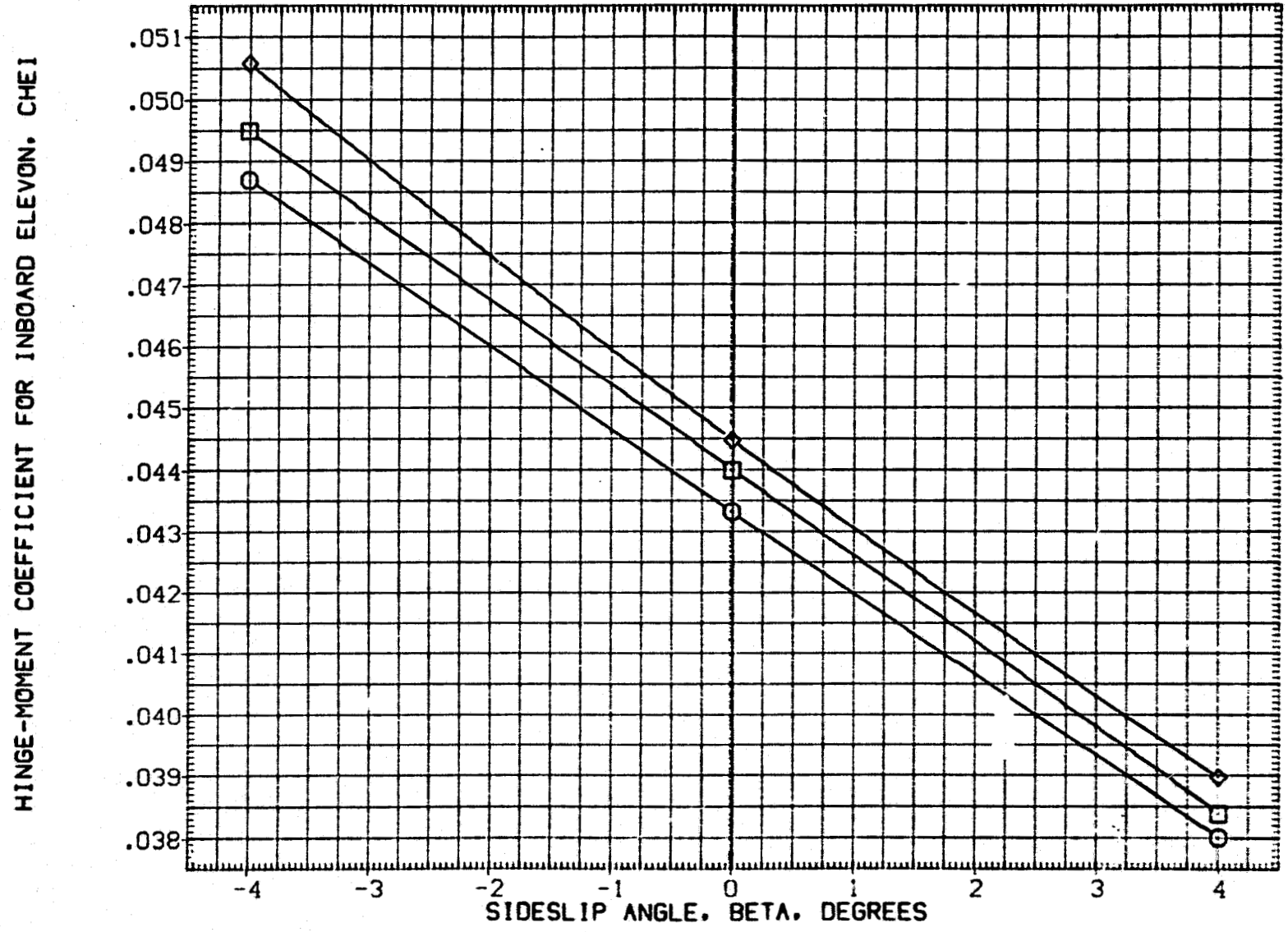



FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y41) | ⊏ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4Y33) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

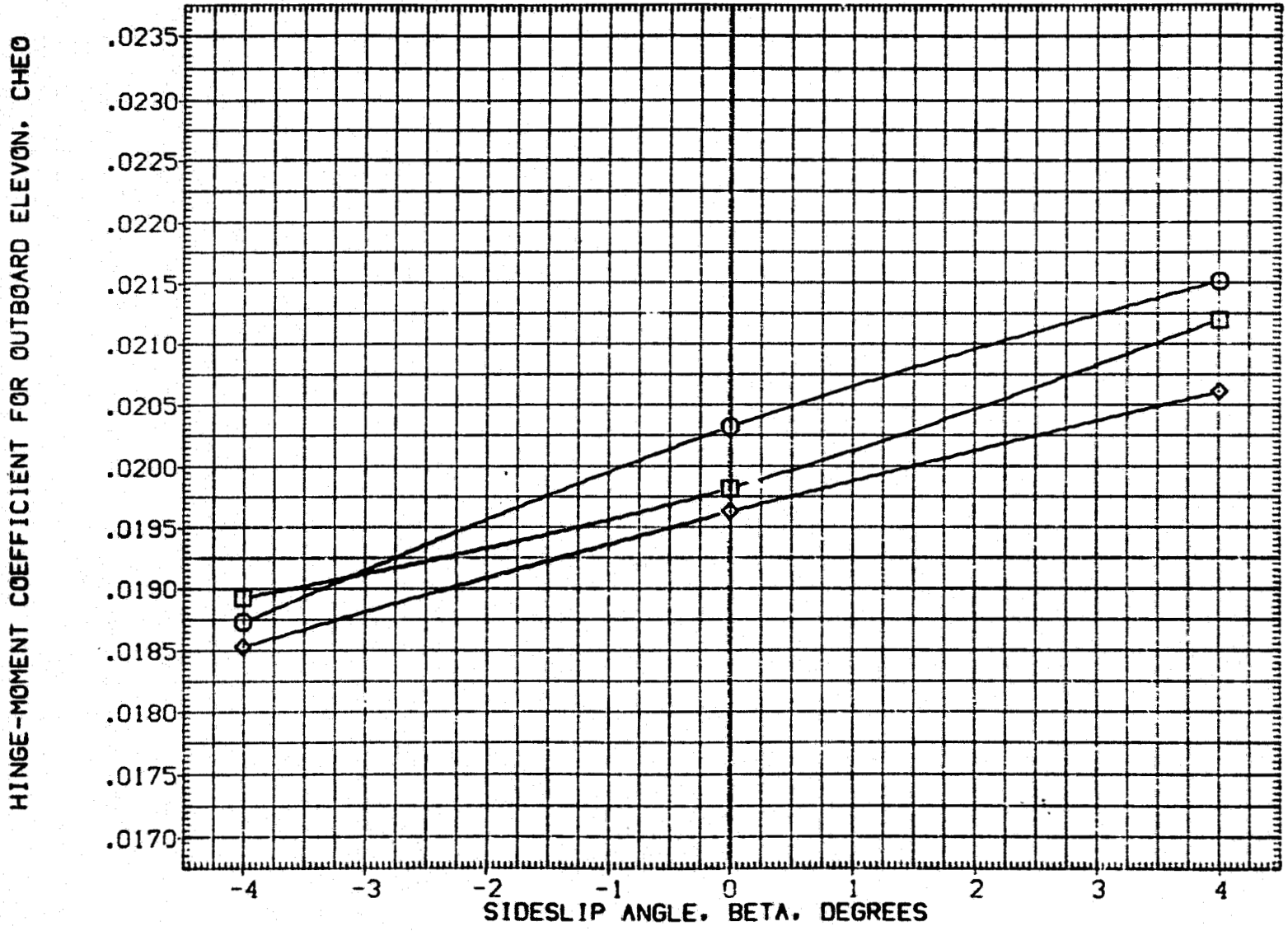



FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y41) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4Y33) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

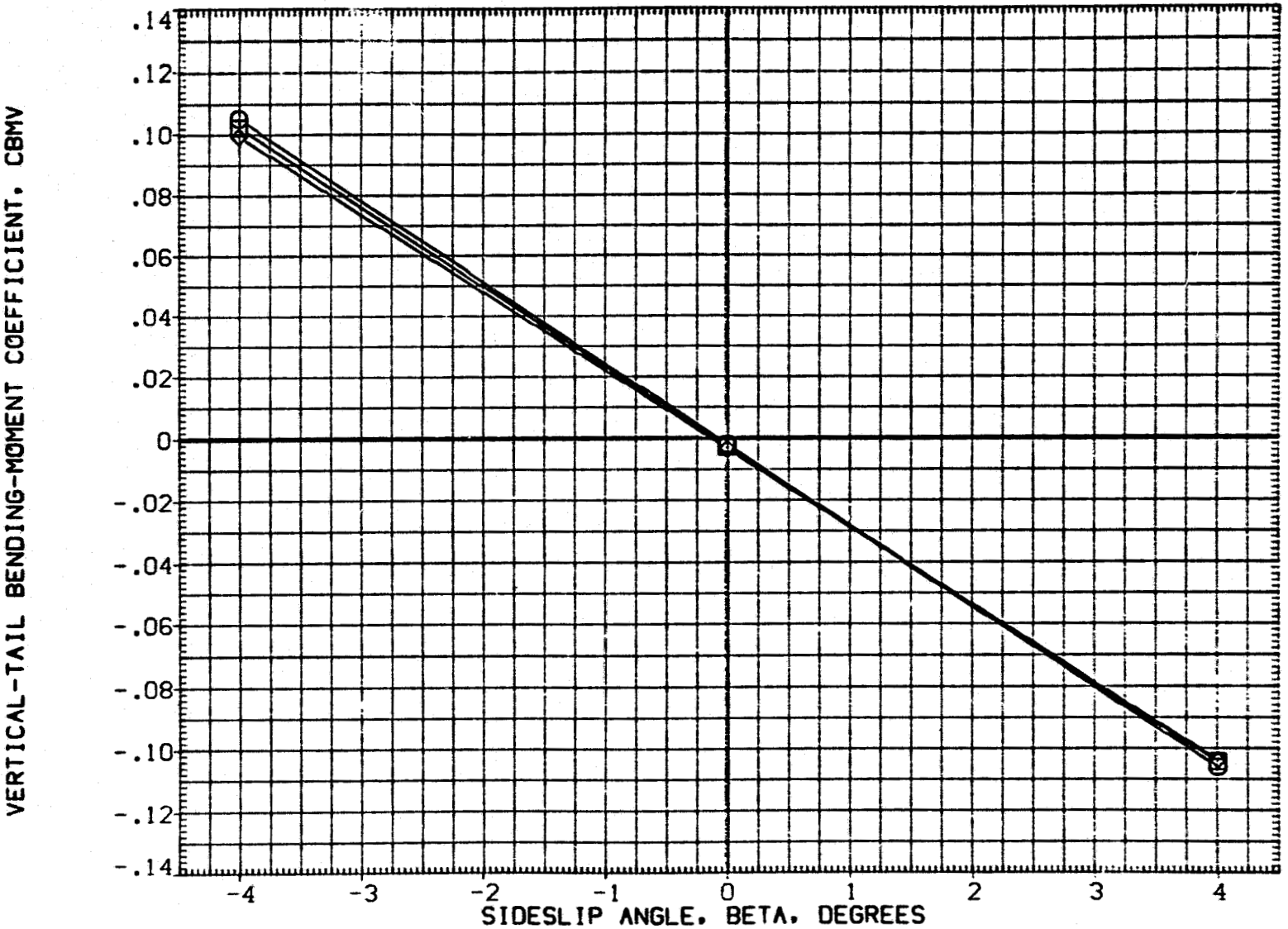



FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y28) ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y41) □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4Y33) ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

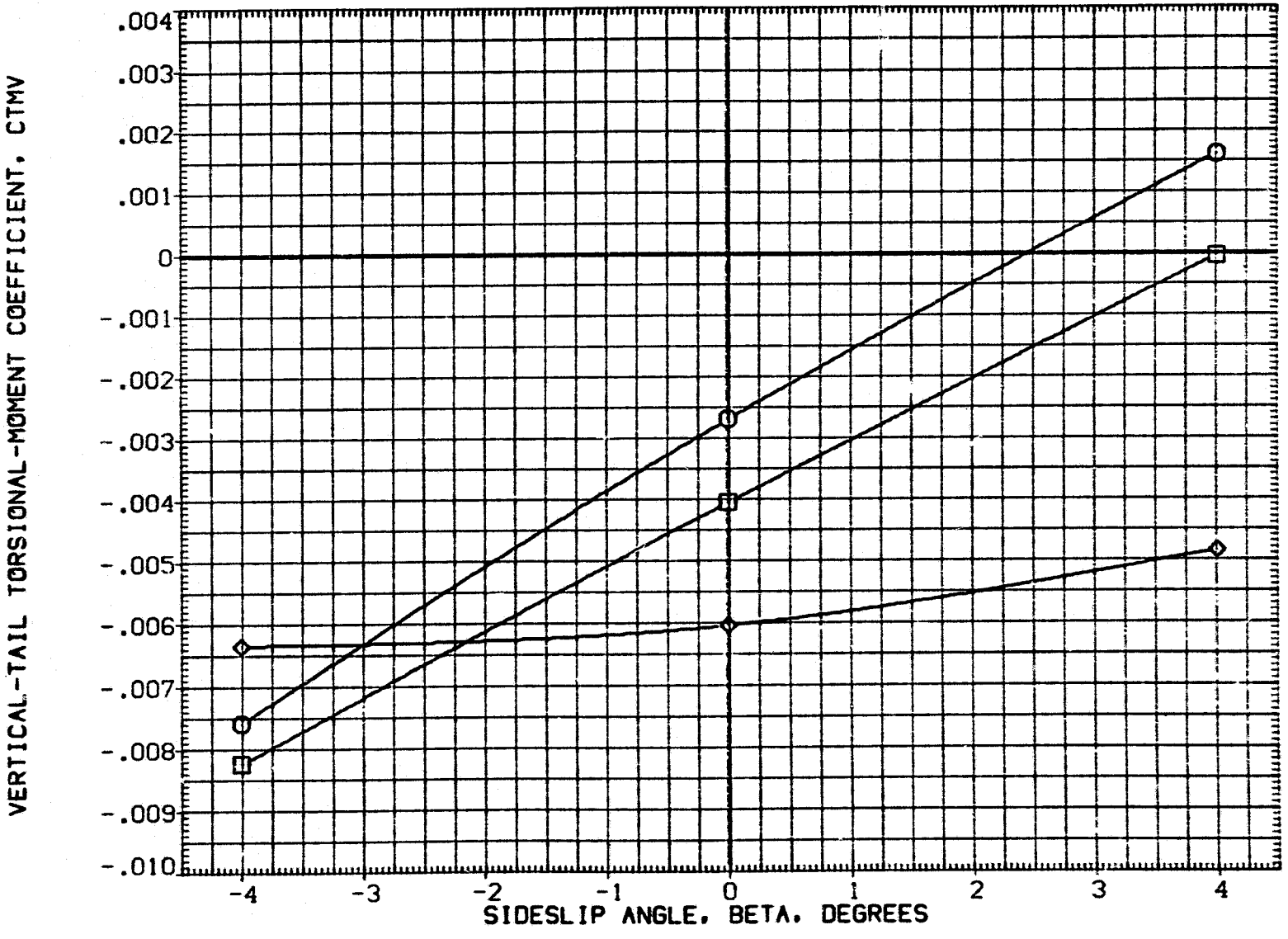



FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y41) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4Y33) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

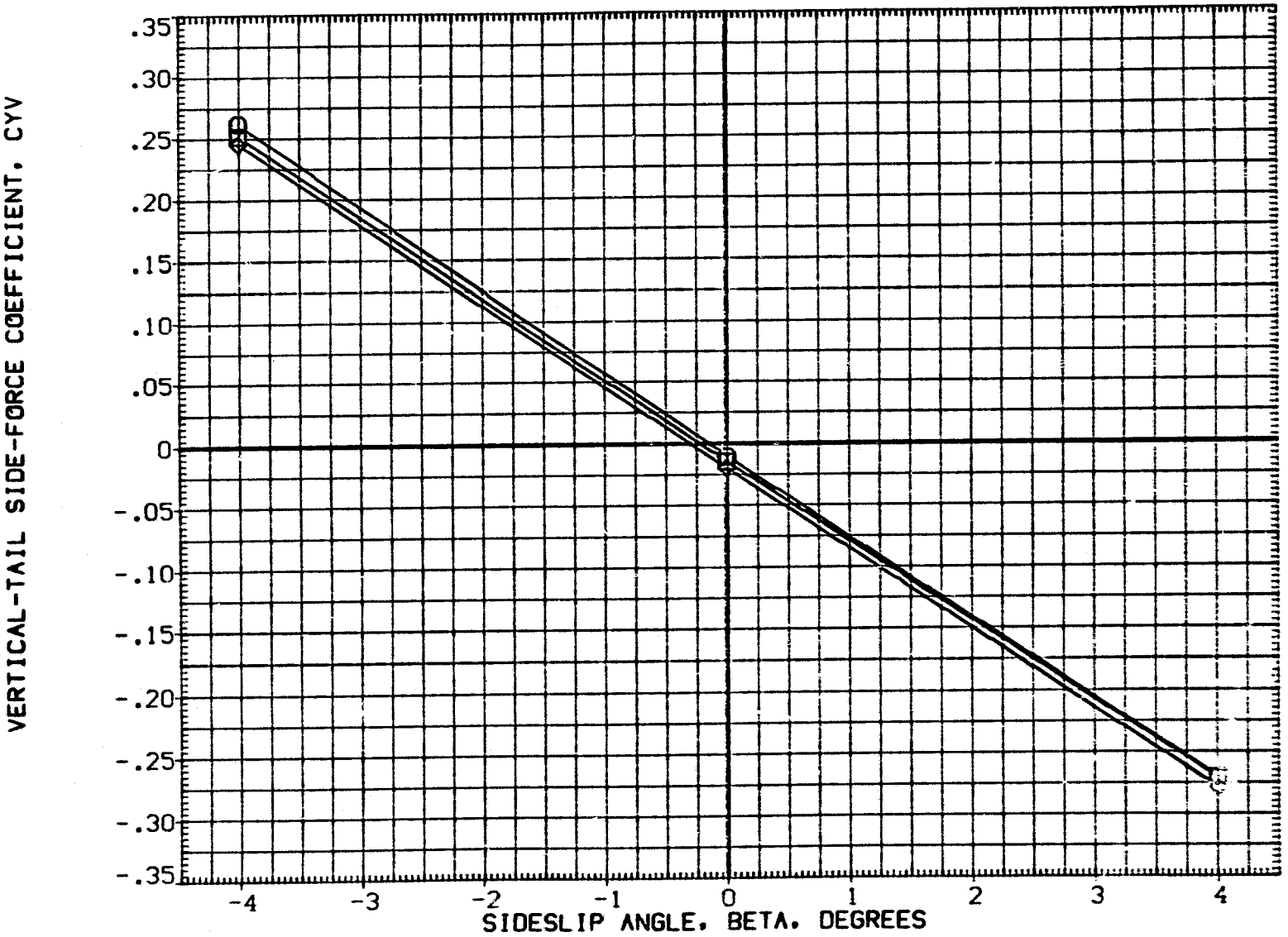



FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 3.400 |
| (RE4Y41) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 2.500 |
| (RE4Y33) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

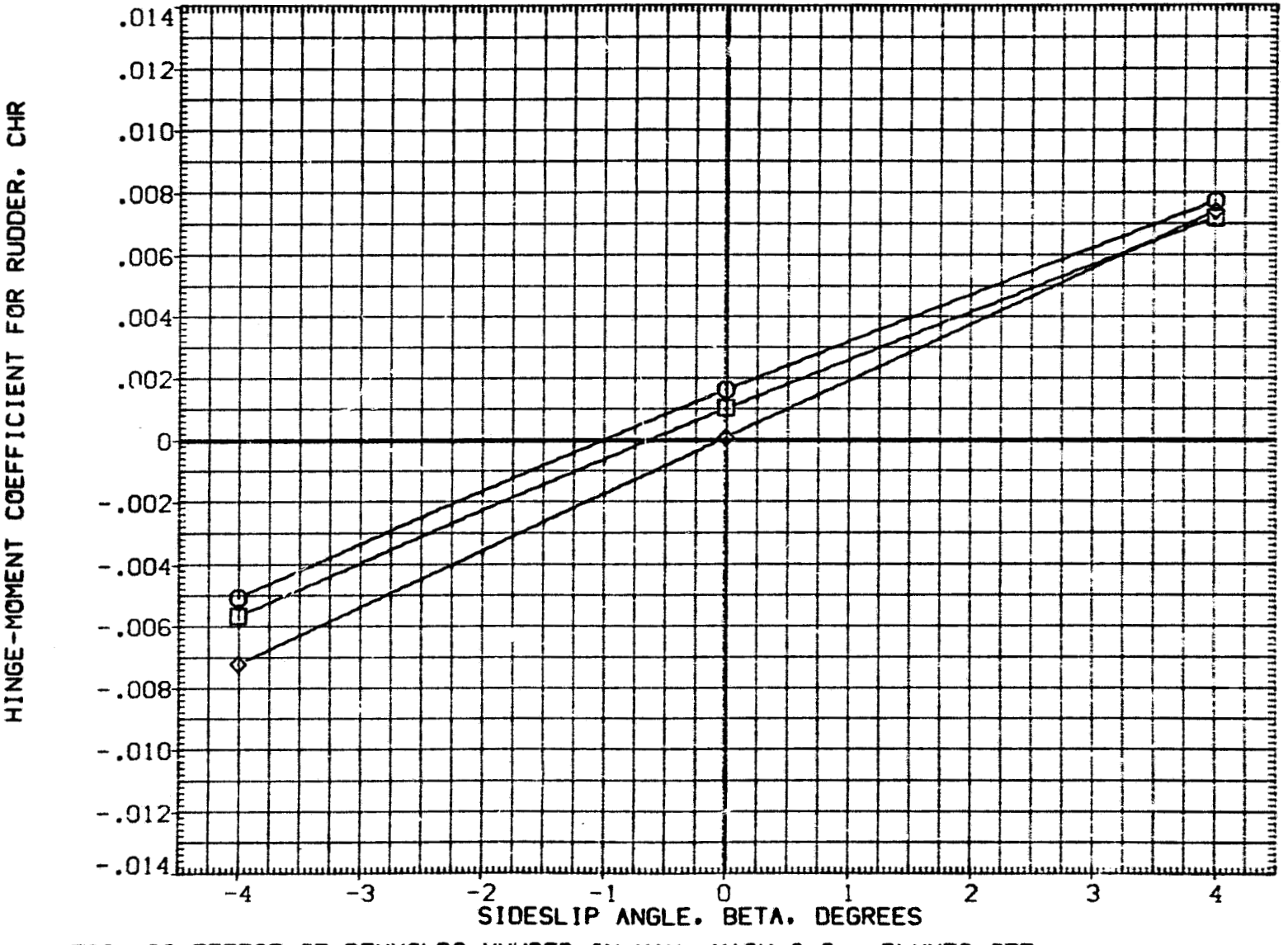



FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y42) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4Y34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

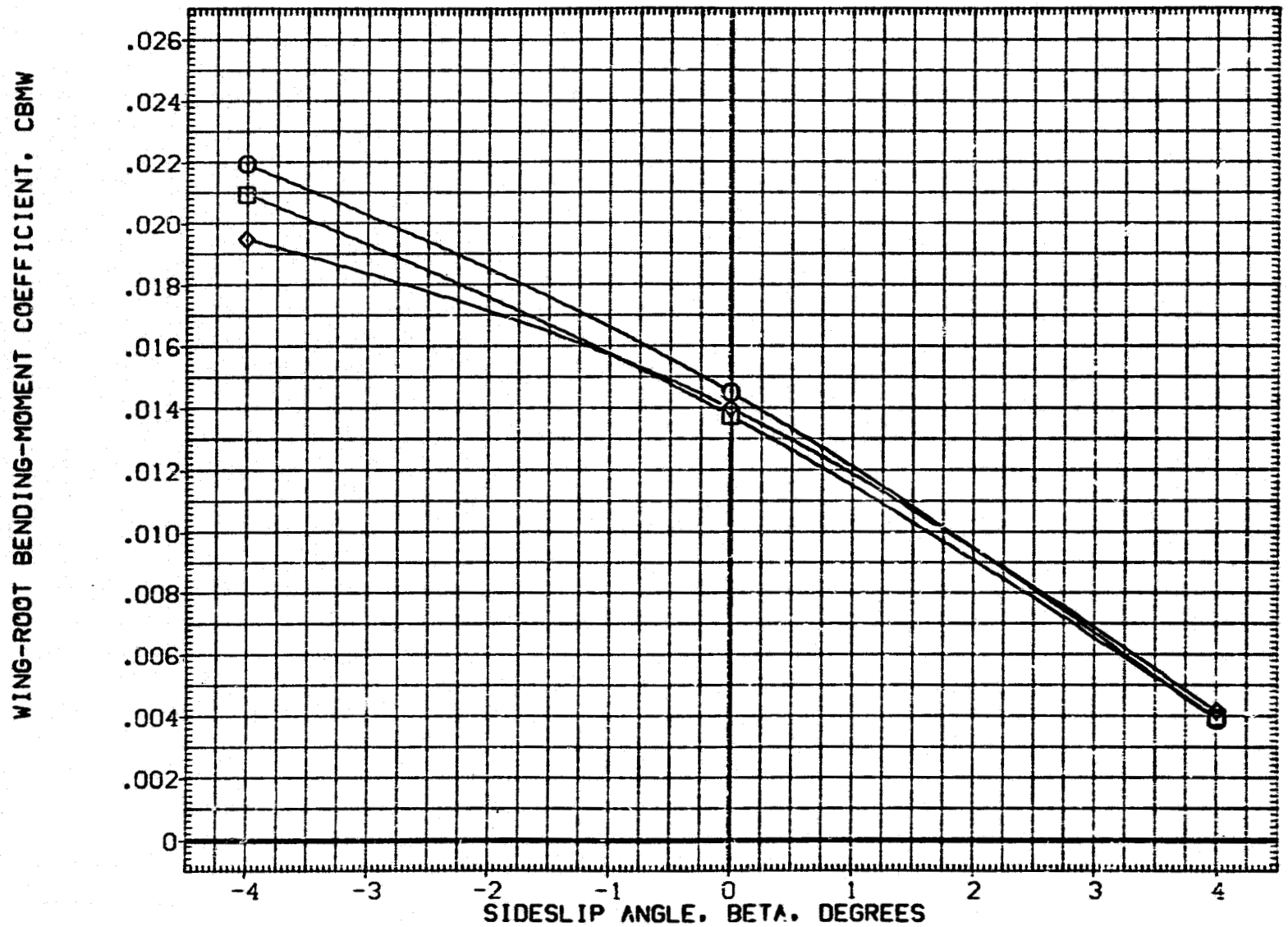



FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y42) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4Y34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

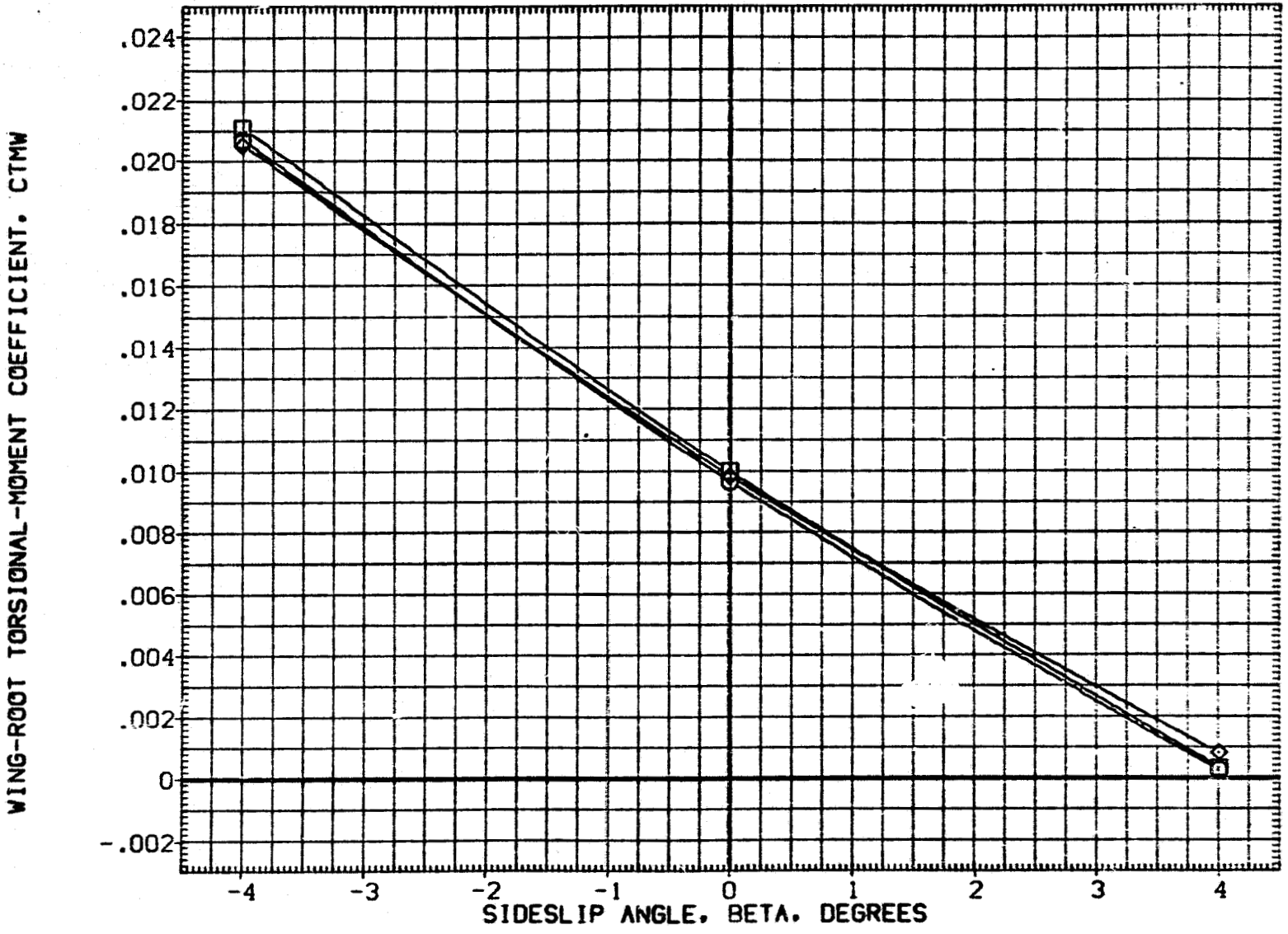



FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y42) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4Y34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

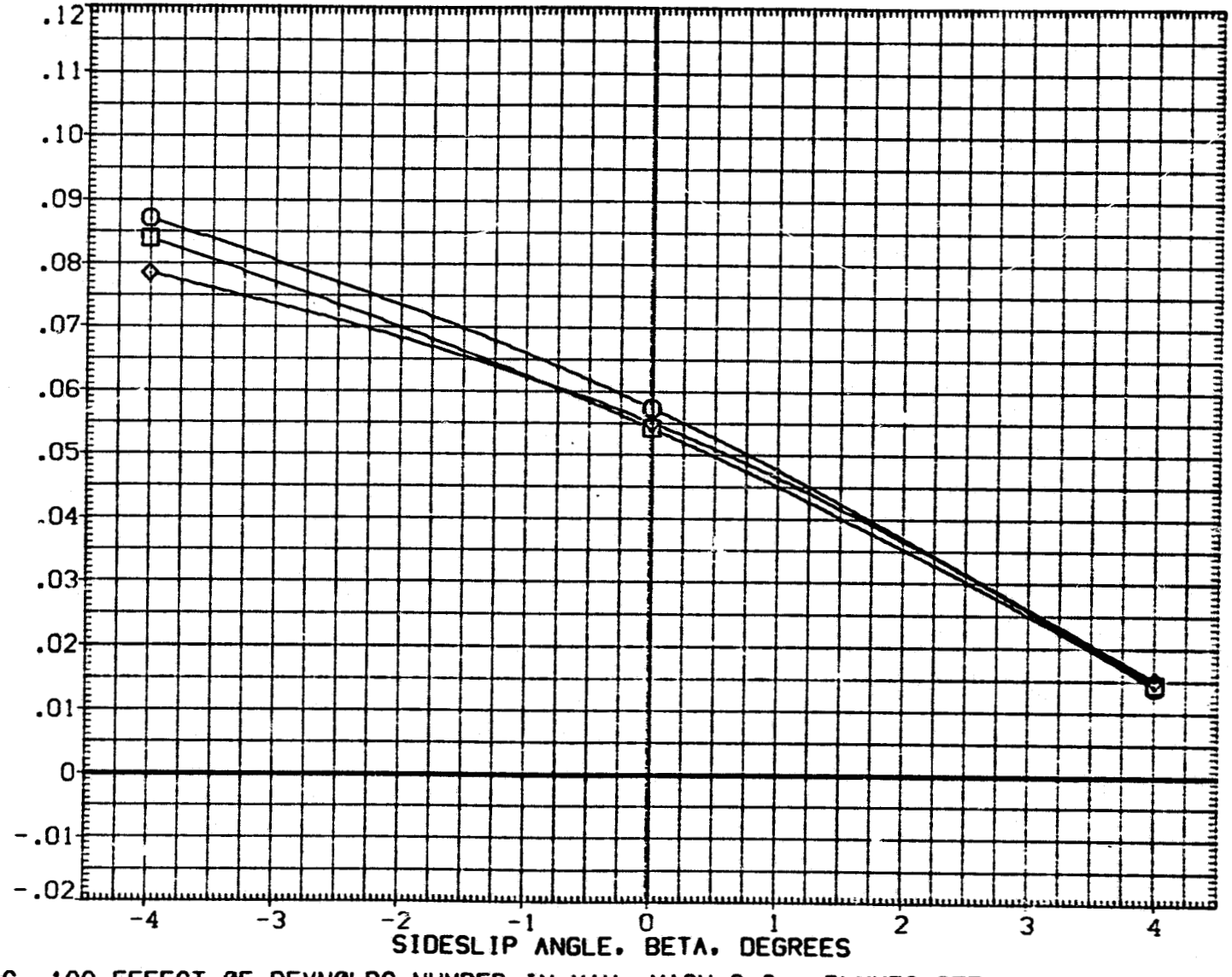



FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y42) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4Y34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

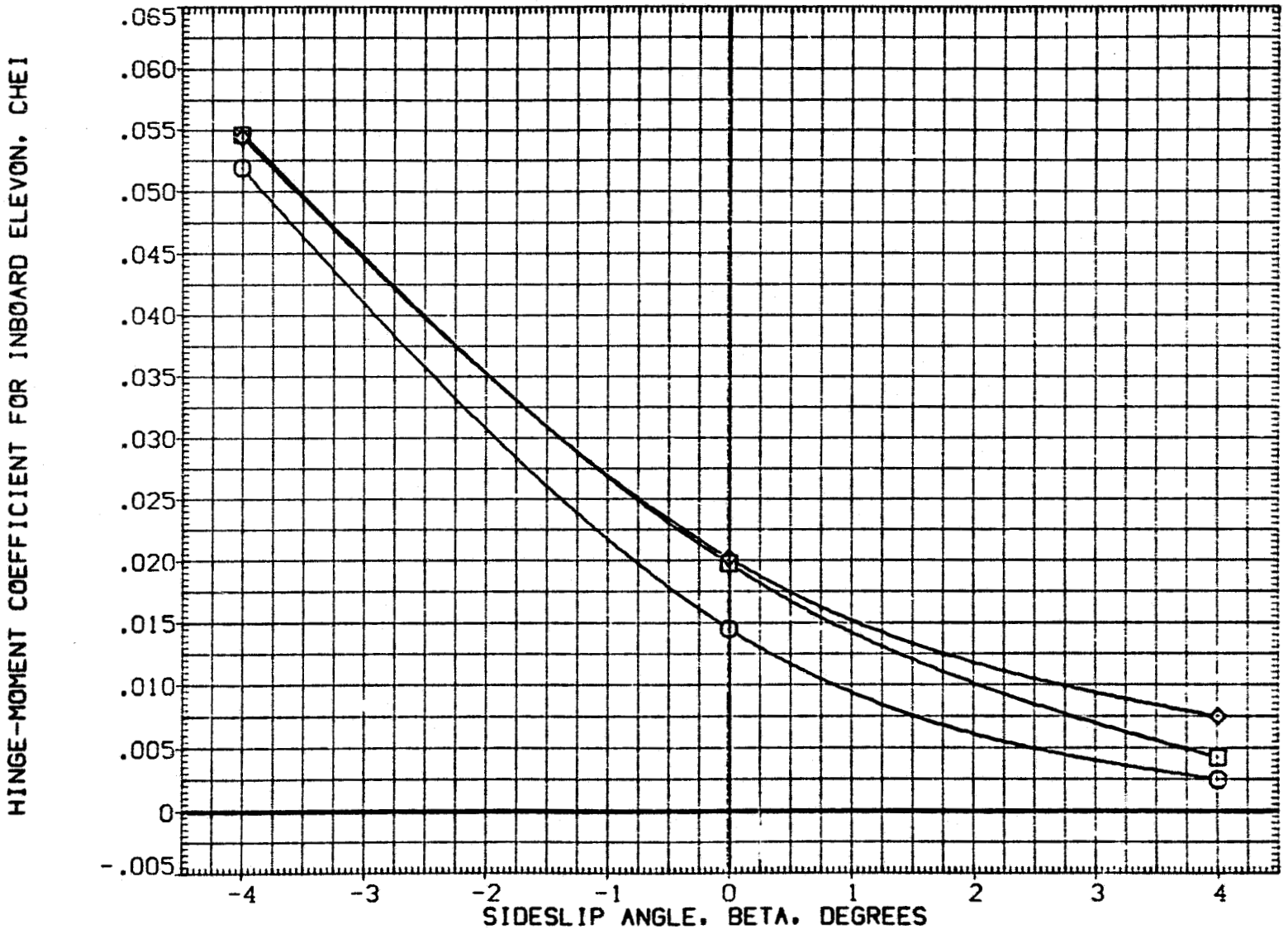



FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y42) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4Y34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

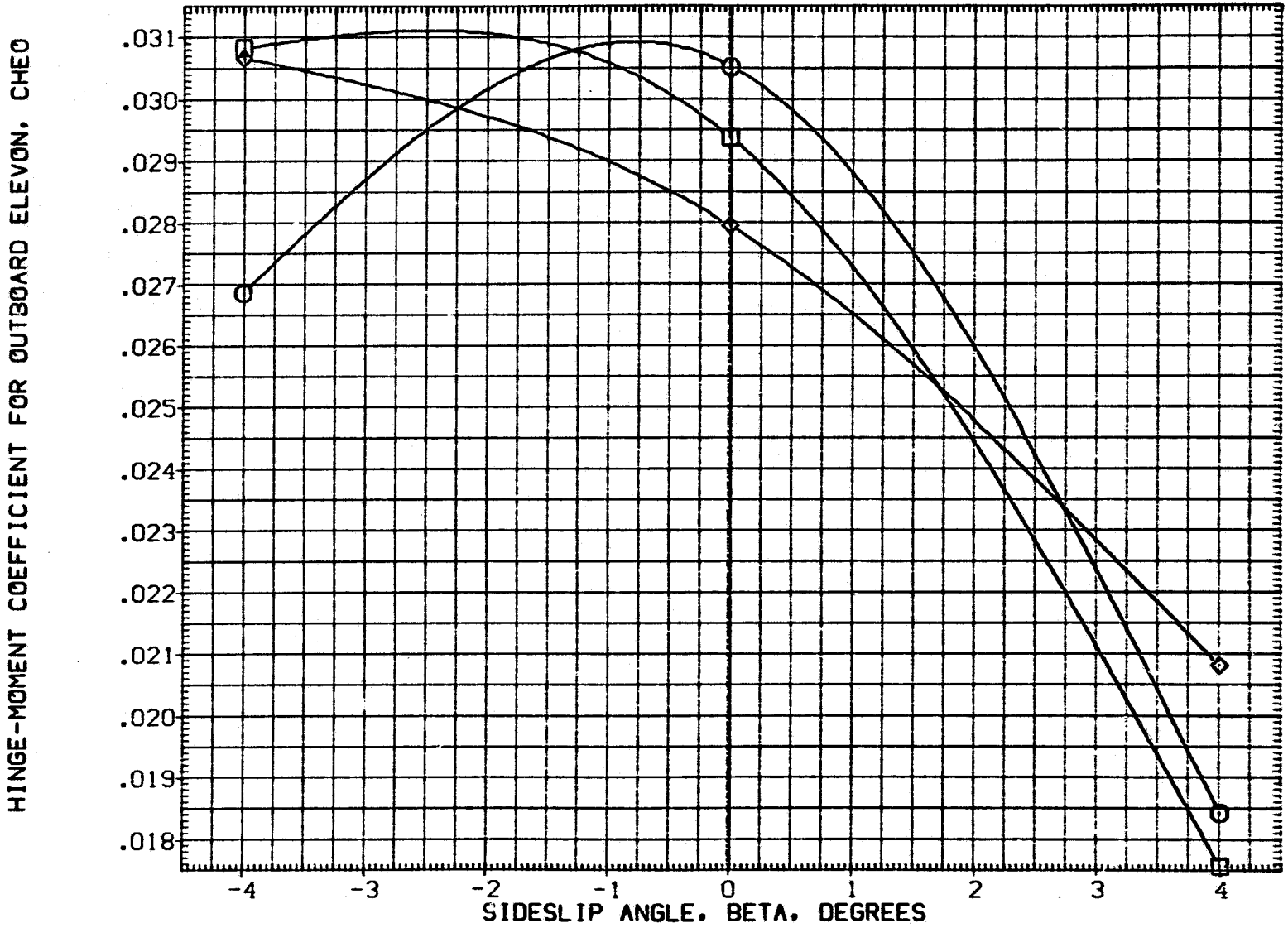



FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y42) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4Y34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

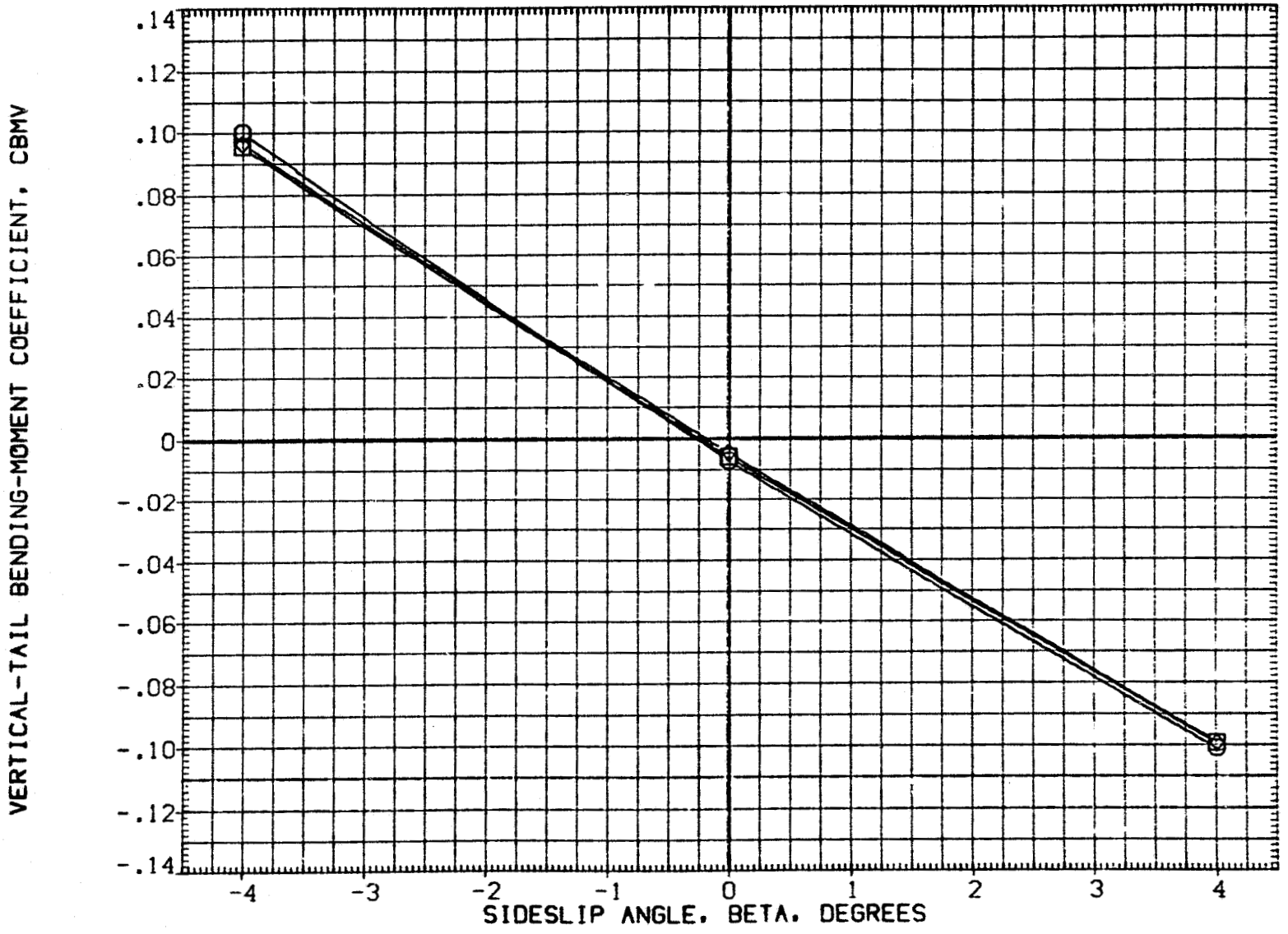



FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y42) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4Y34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

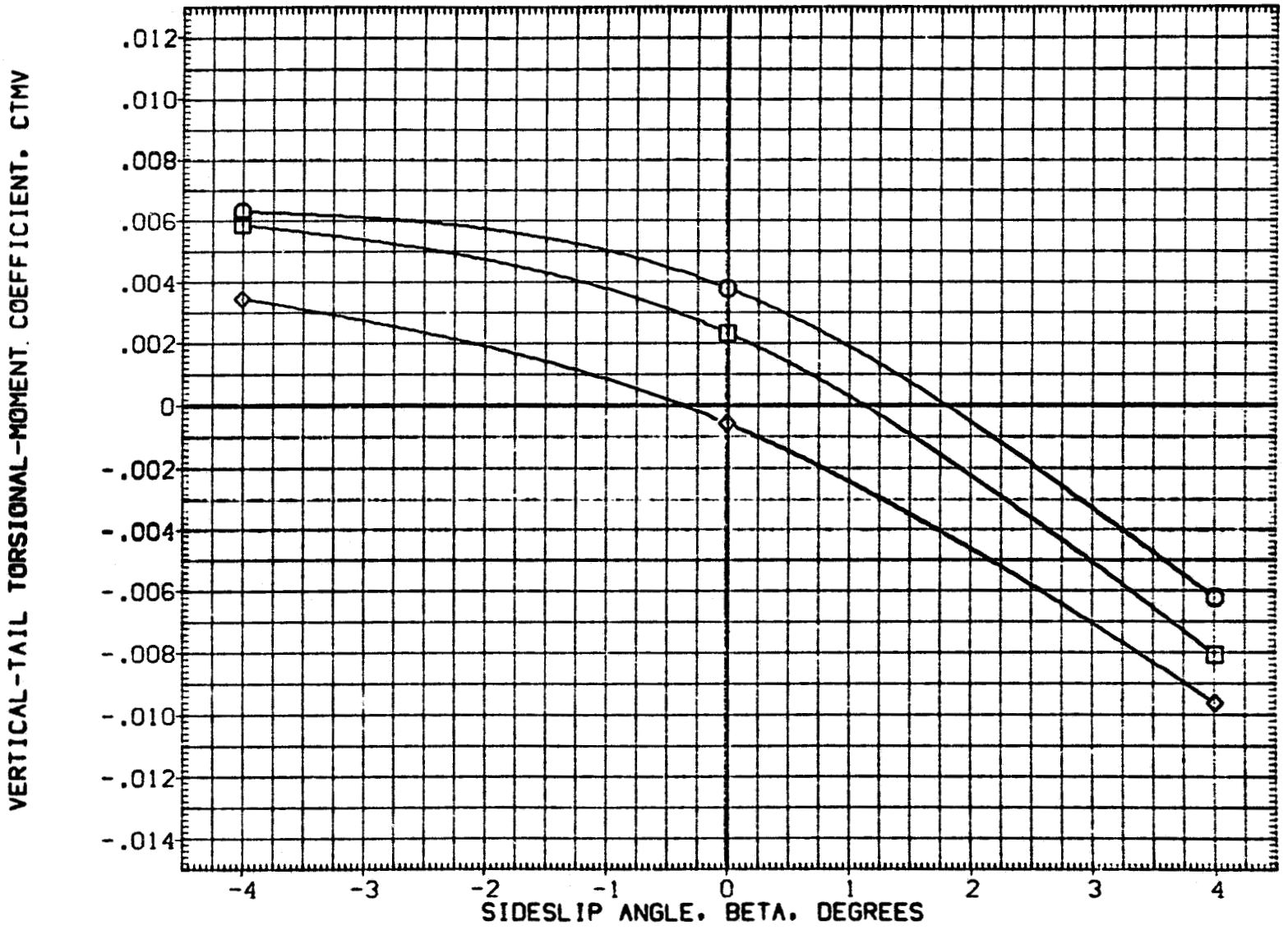



FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y42) | ◇□ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4Y34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y29) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 4.250 |
| (RE4Y42) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 3.250 |
| (RE4Y34) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

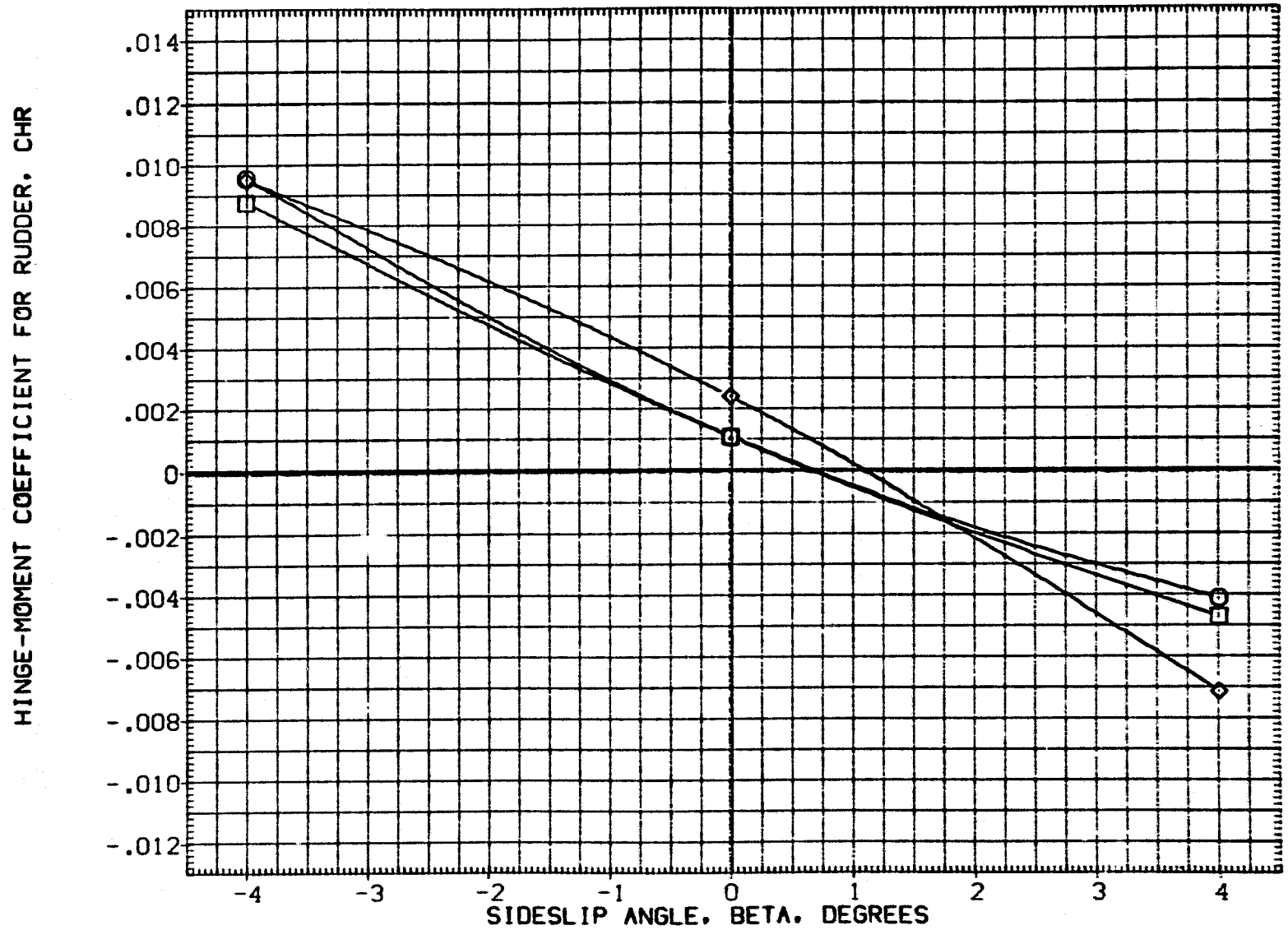



FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y43) | □ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y35) | ◇ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

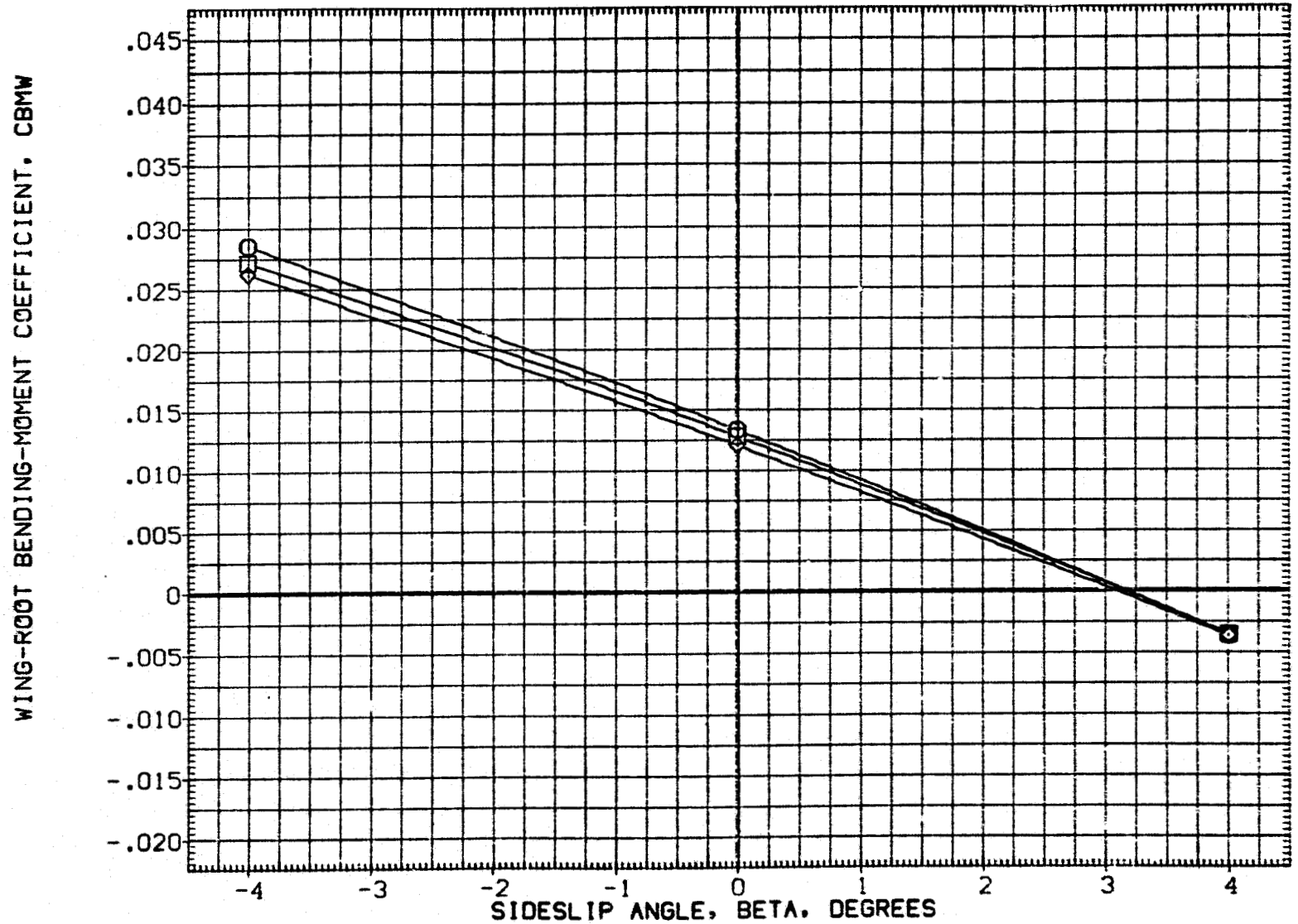



FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y43) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y35) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

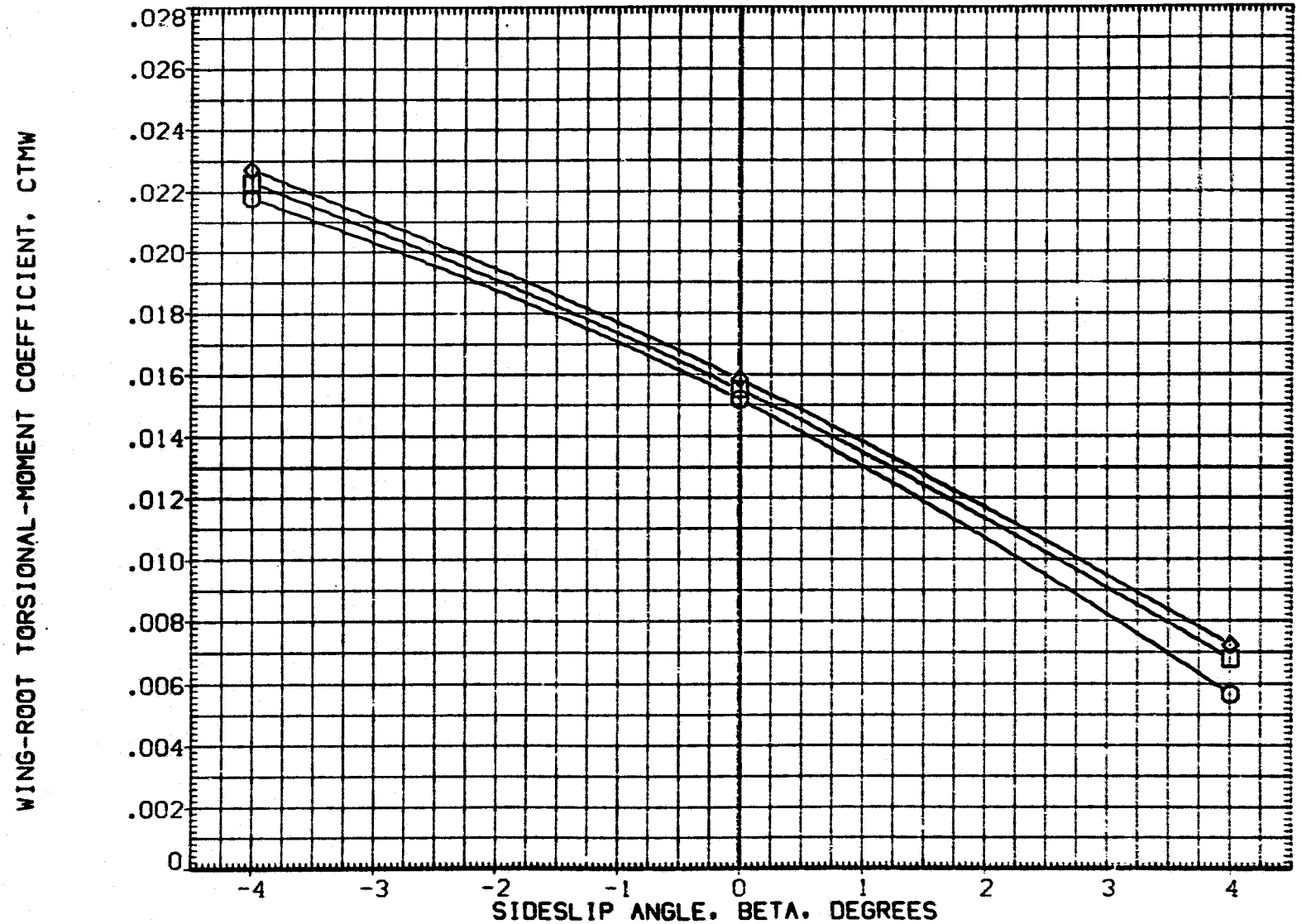



FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y43) | ◁□ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y35) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

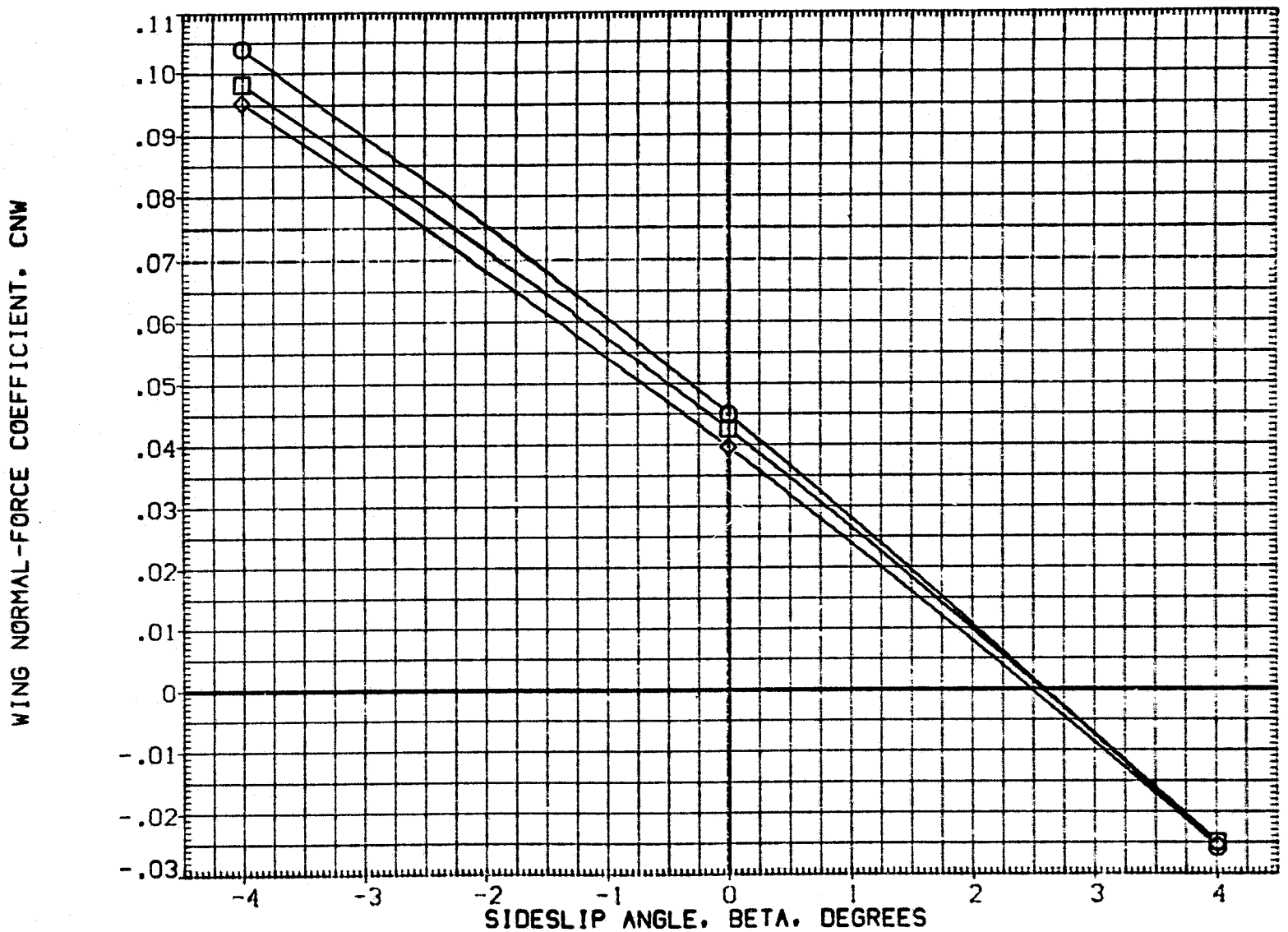



FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | □ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y43) | □ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y35) | ◇ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

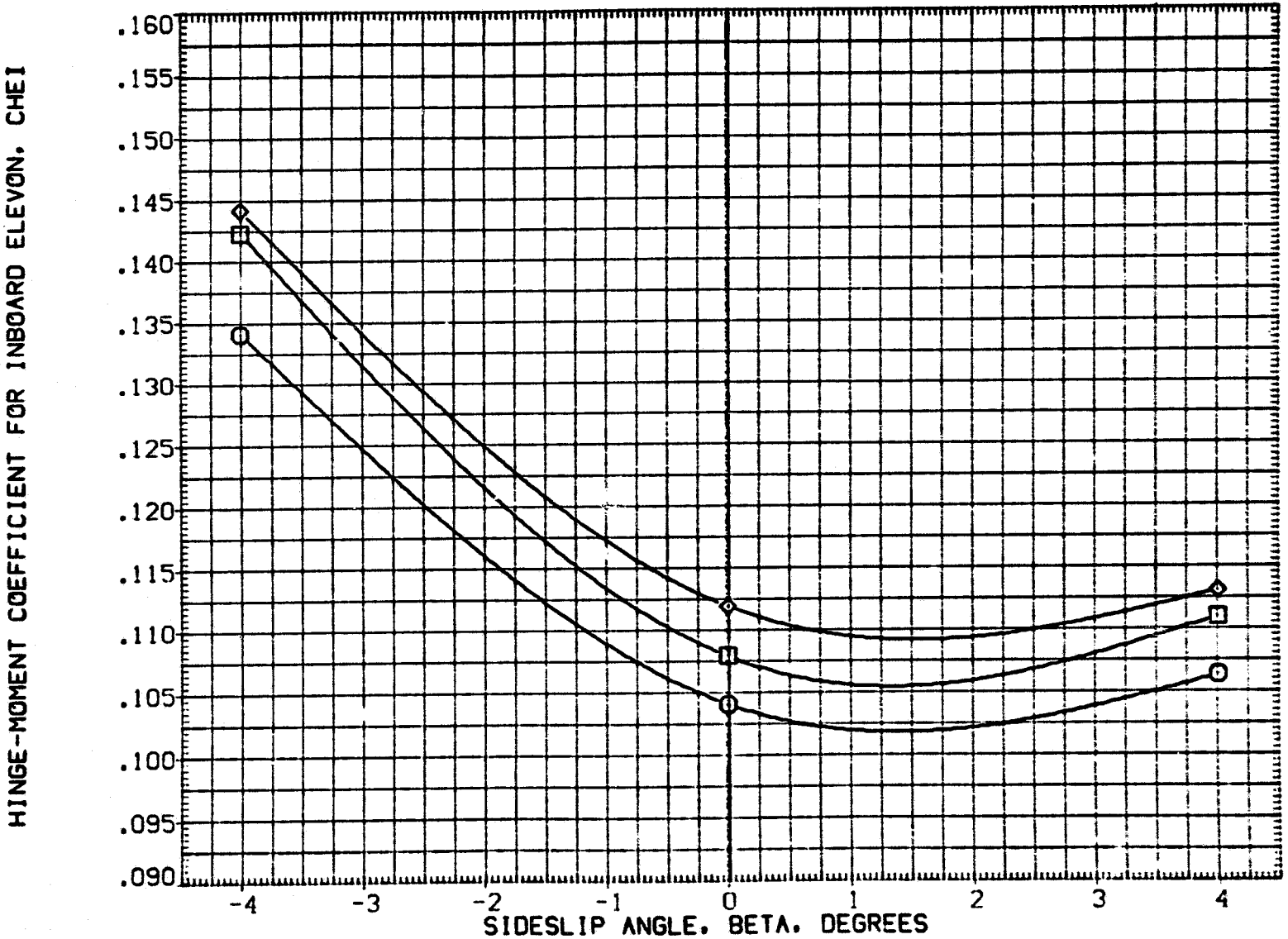



FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y30) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y43) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y35) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

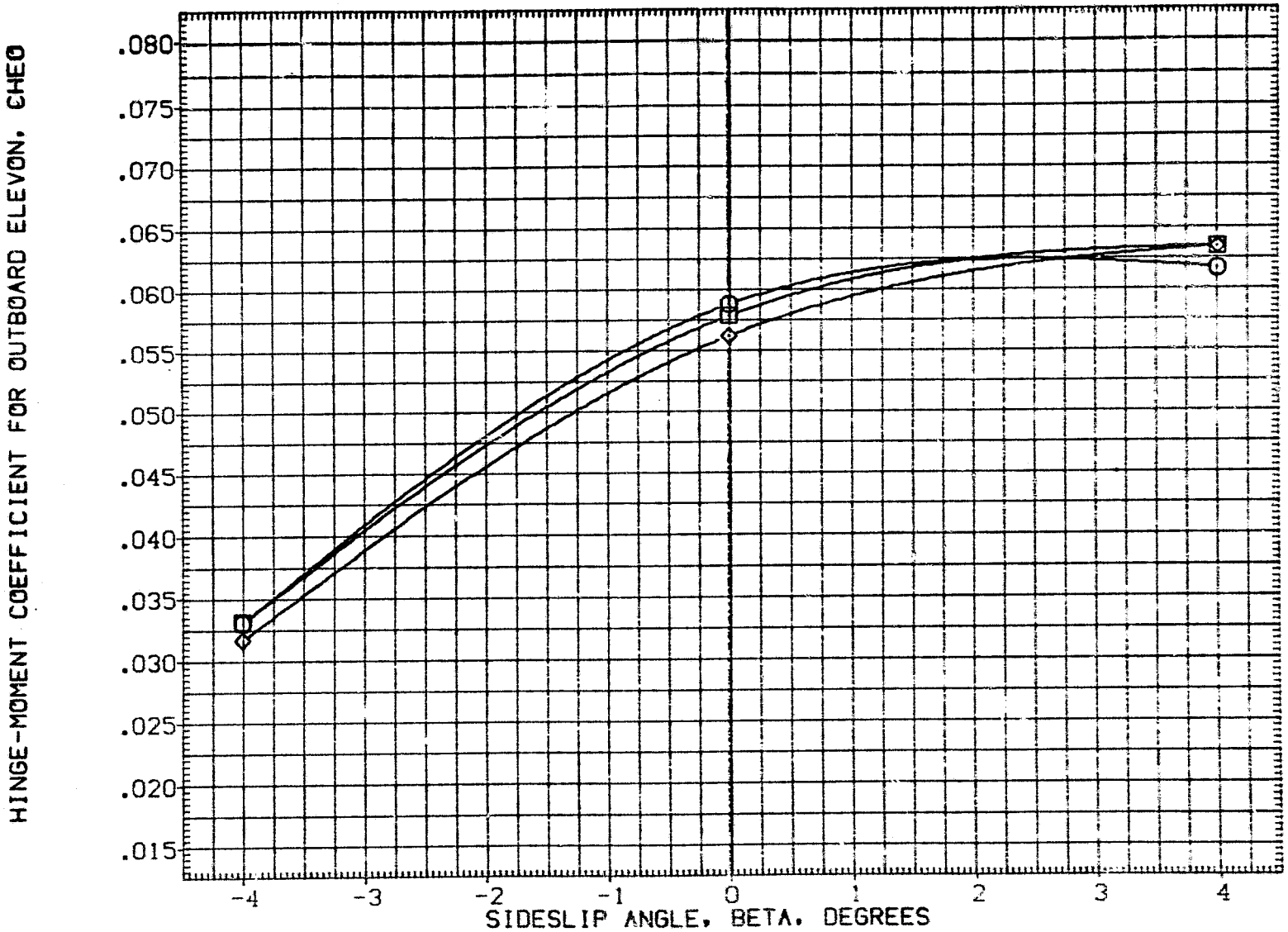



FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y43) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y35) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

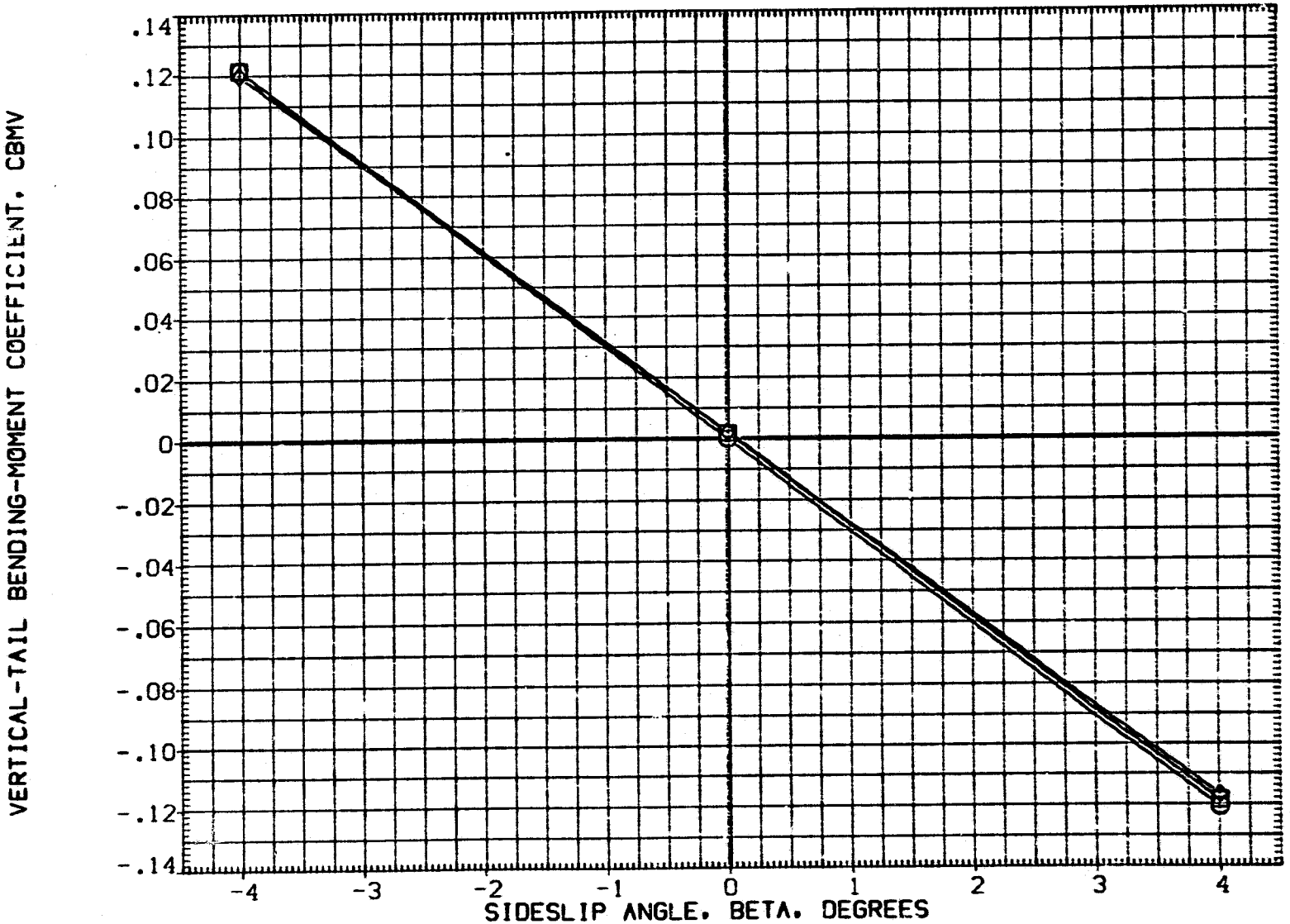



FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y43) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y35) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

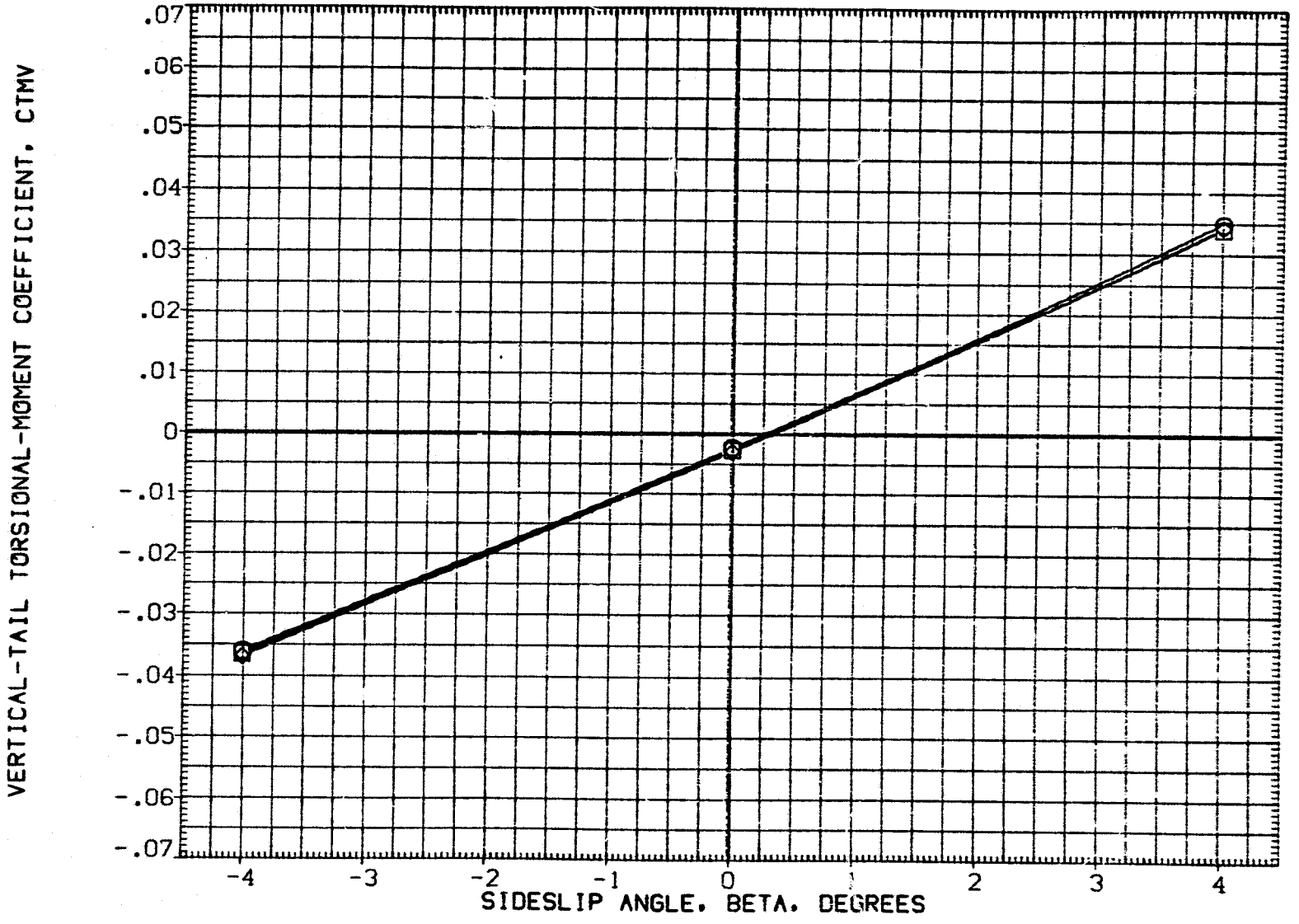



FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y43) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y35) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

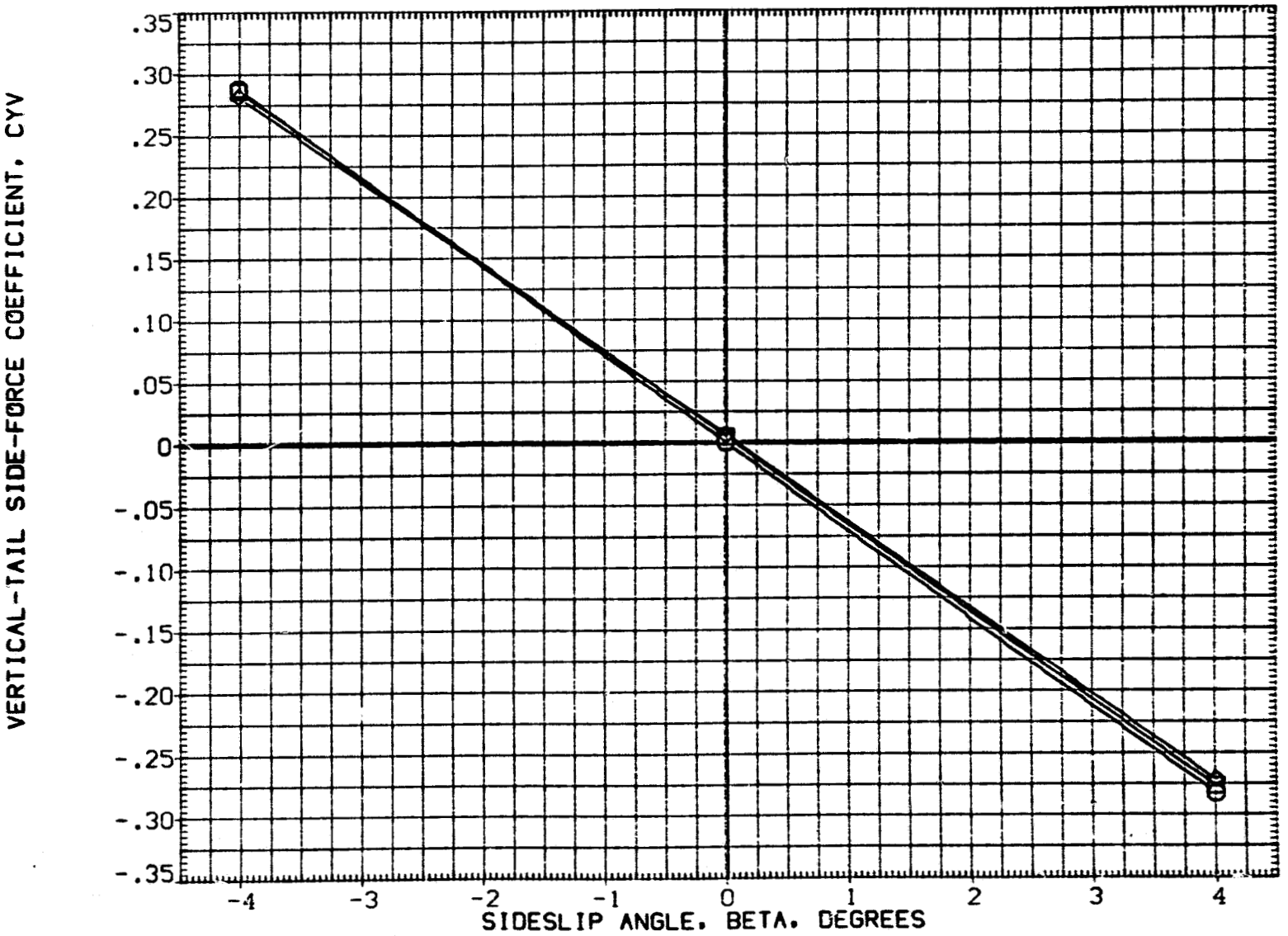



FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y30) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y43) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y35) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

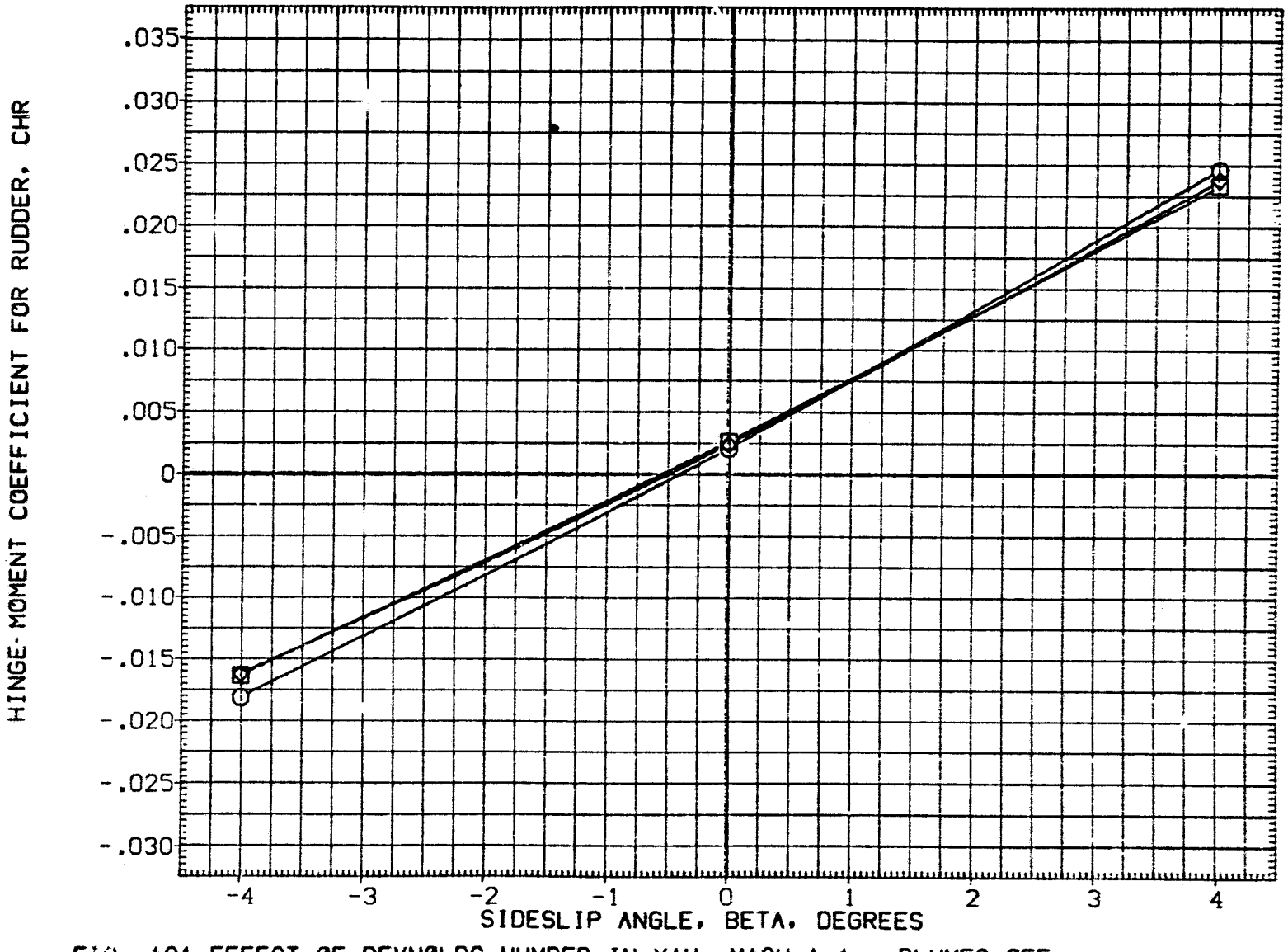



FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA8C OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y44) | □ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4Y36) | ◇ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

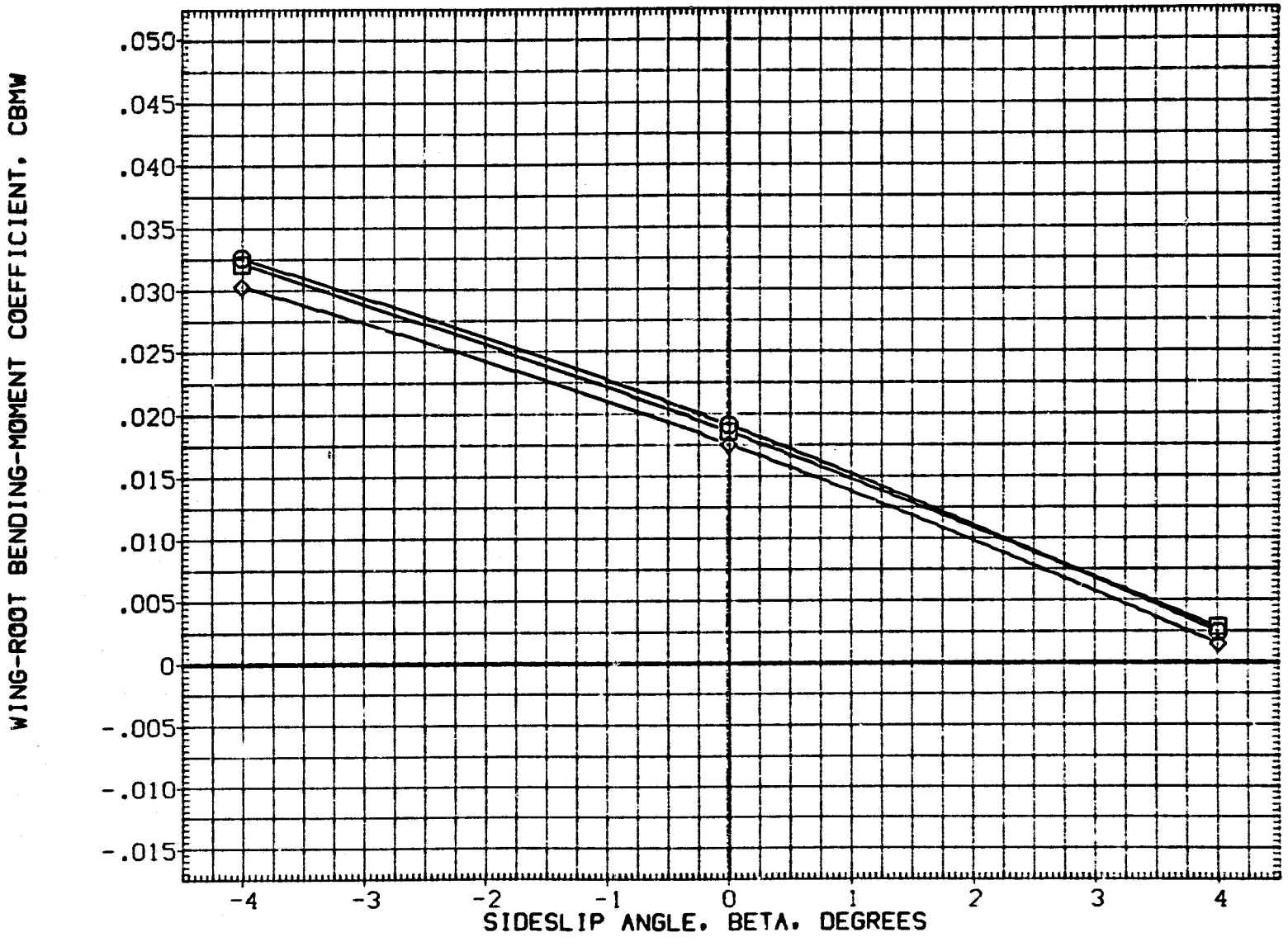



FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 1A80 0TS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y44) | □ | ARC 11-023 1A80 0TS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4Y36) | ◇ | ARC 11-023 1A80 0TS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

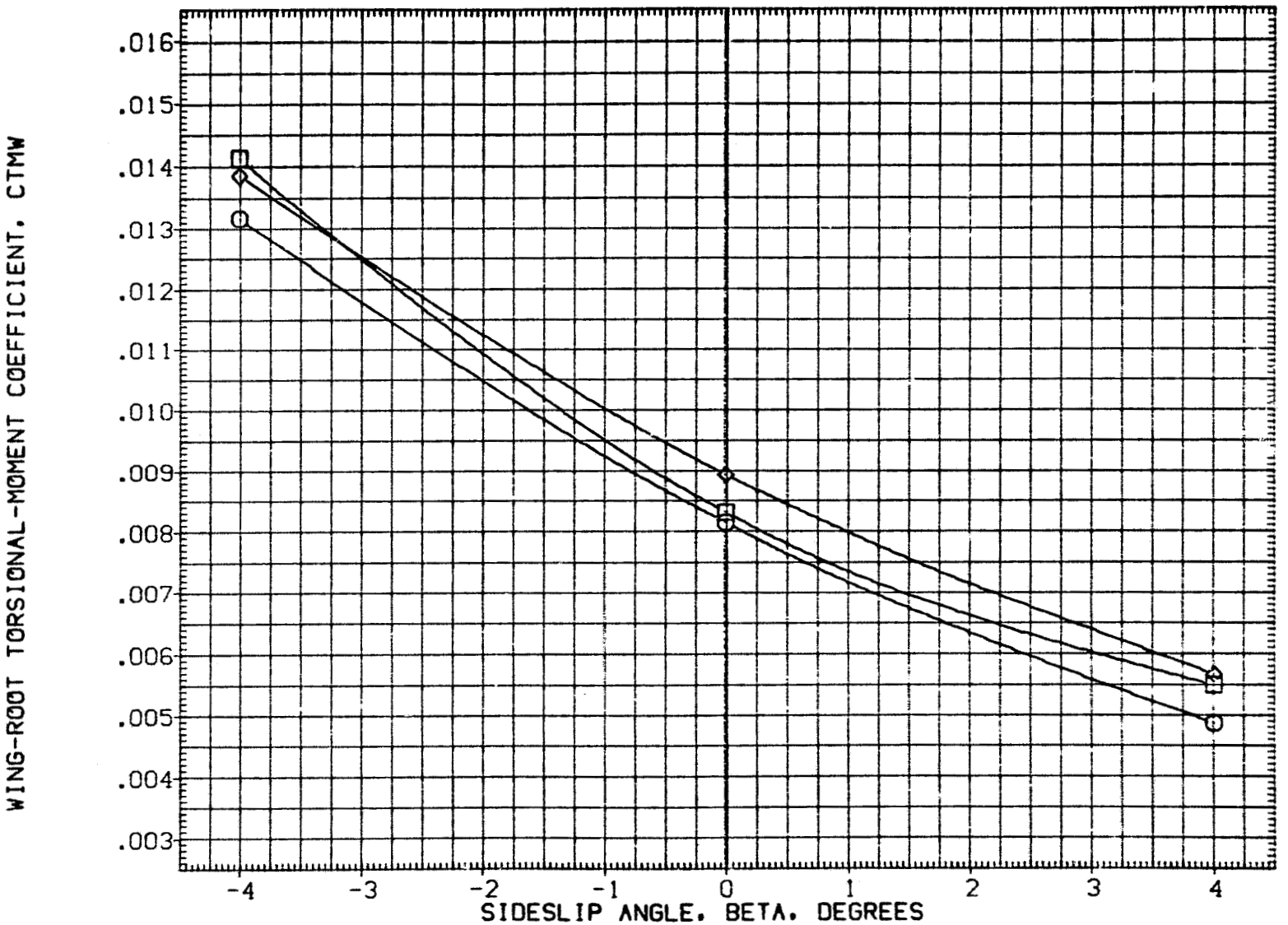



FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y44) | ◁□ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4Y36) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

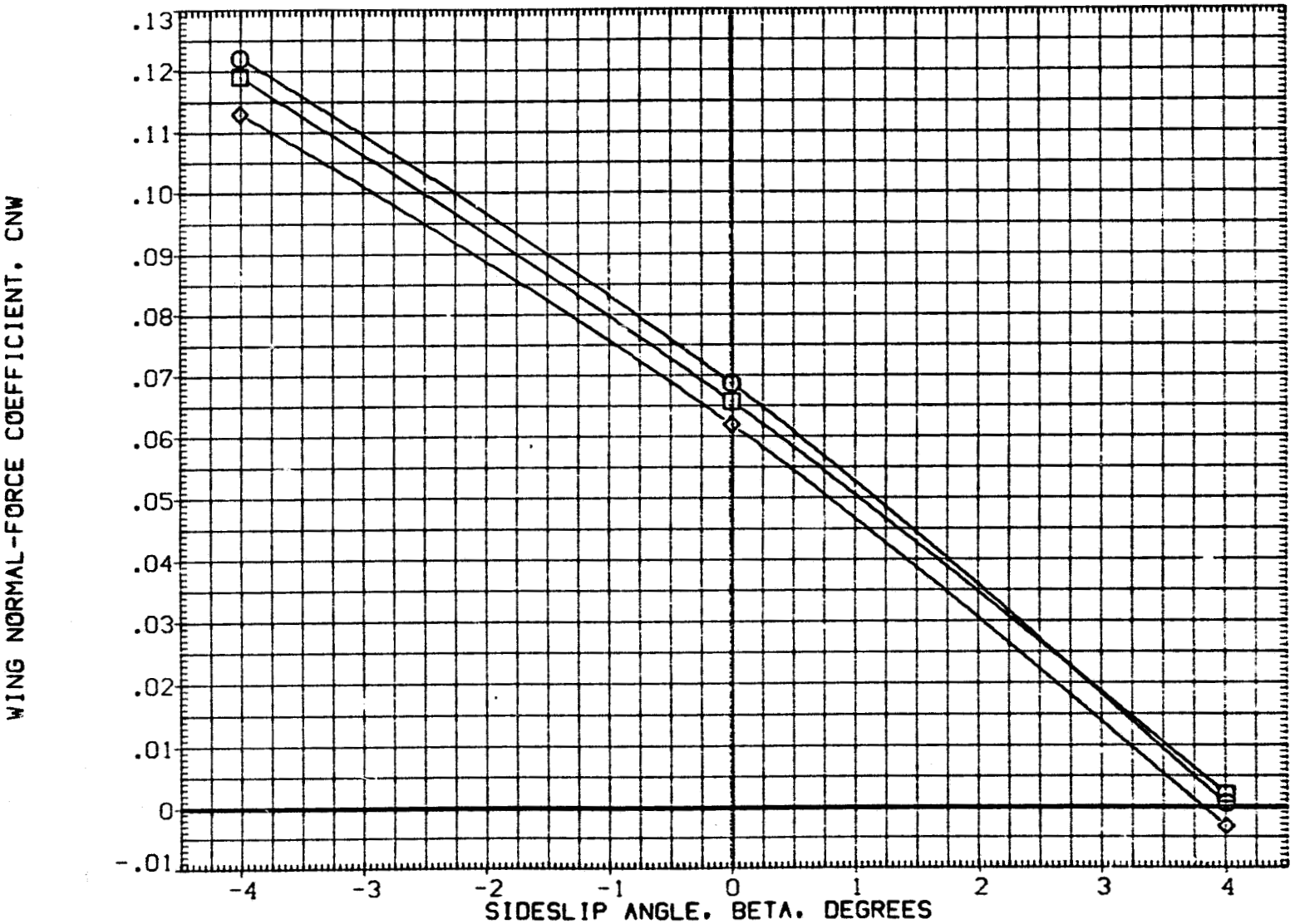



FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y44) | ◇□ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4Y36) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

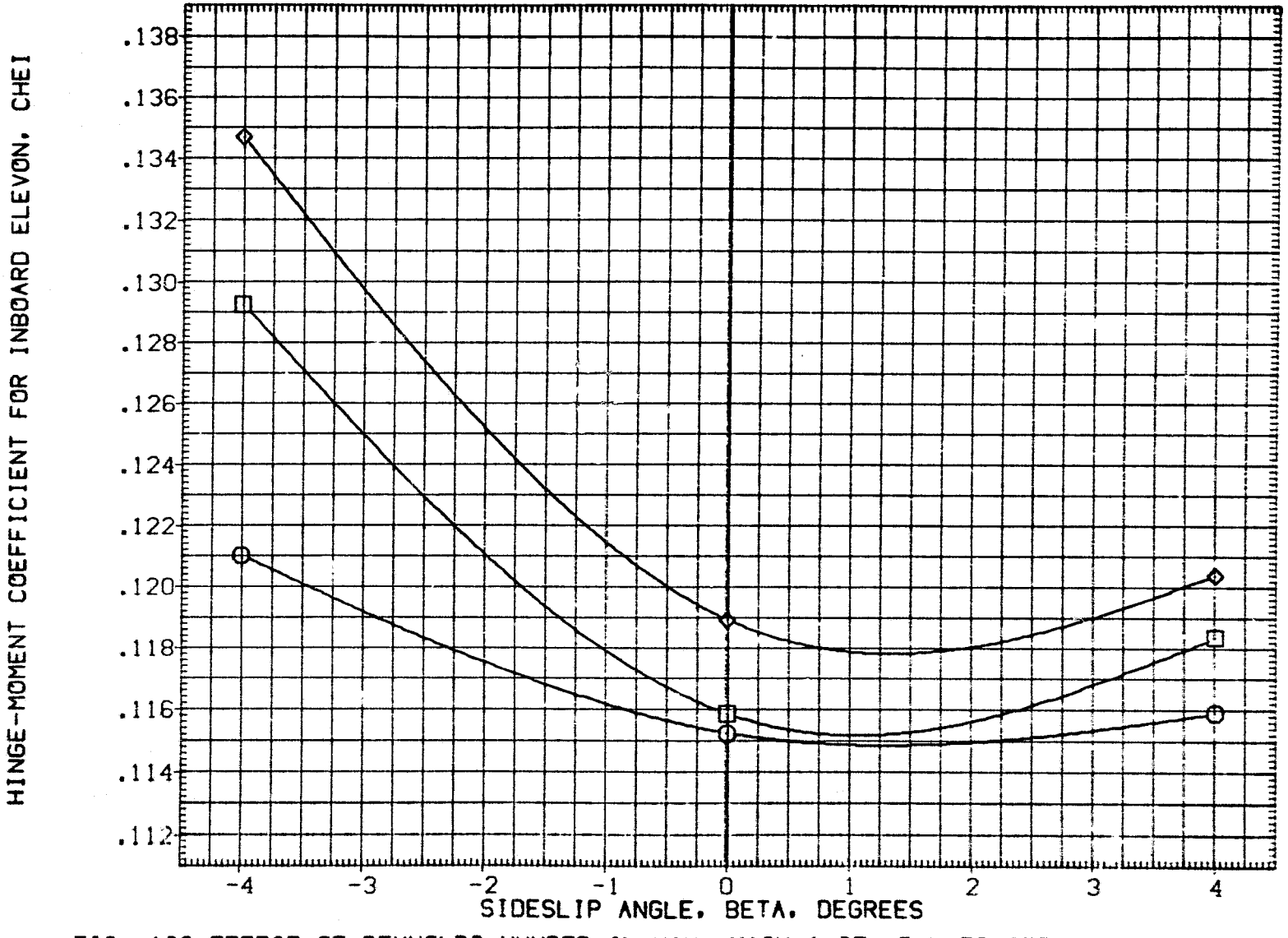



FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y44) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4Y36) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

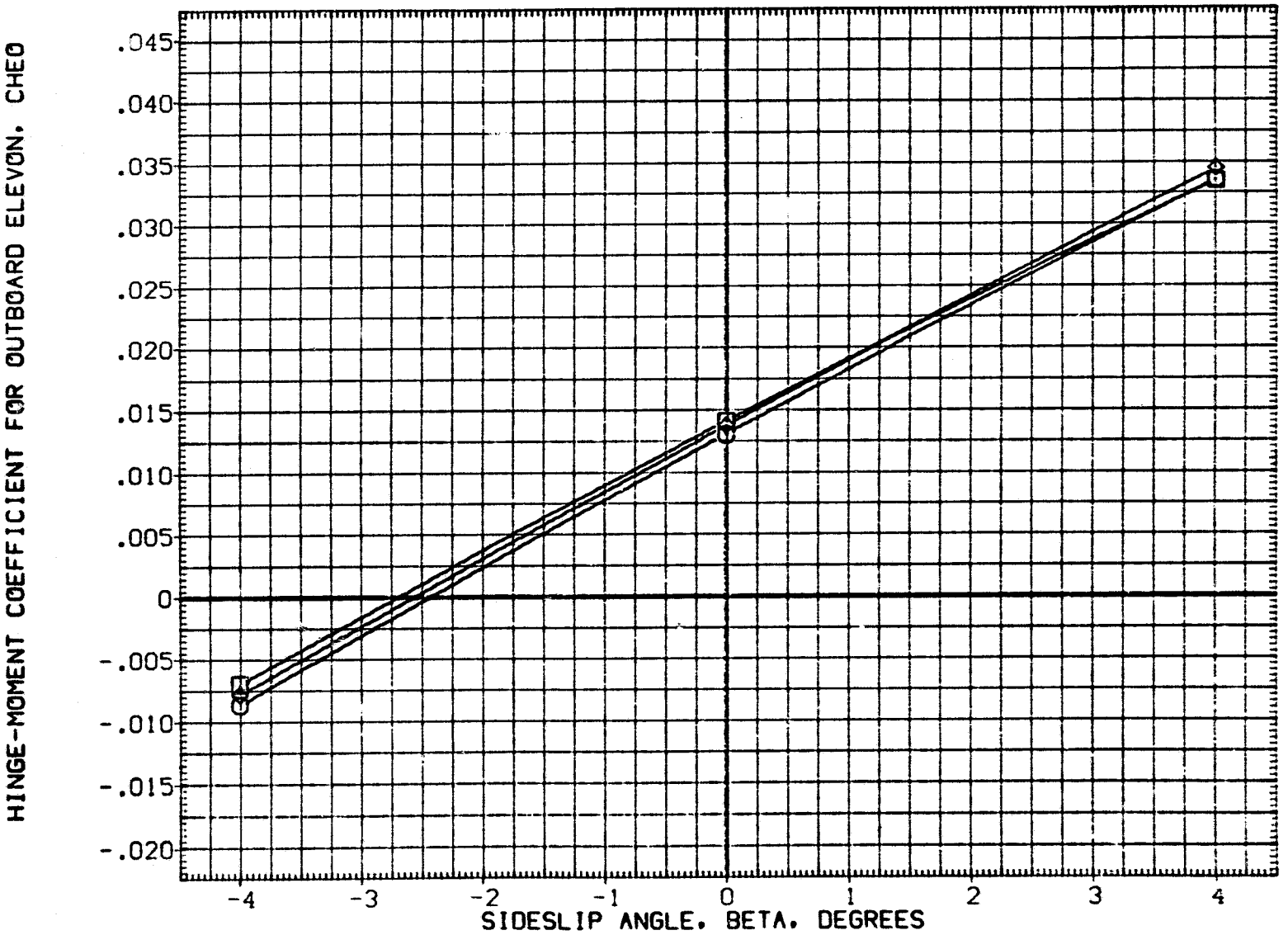



FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y31) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y44) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4Y36) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

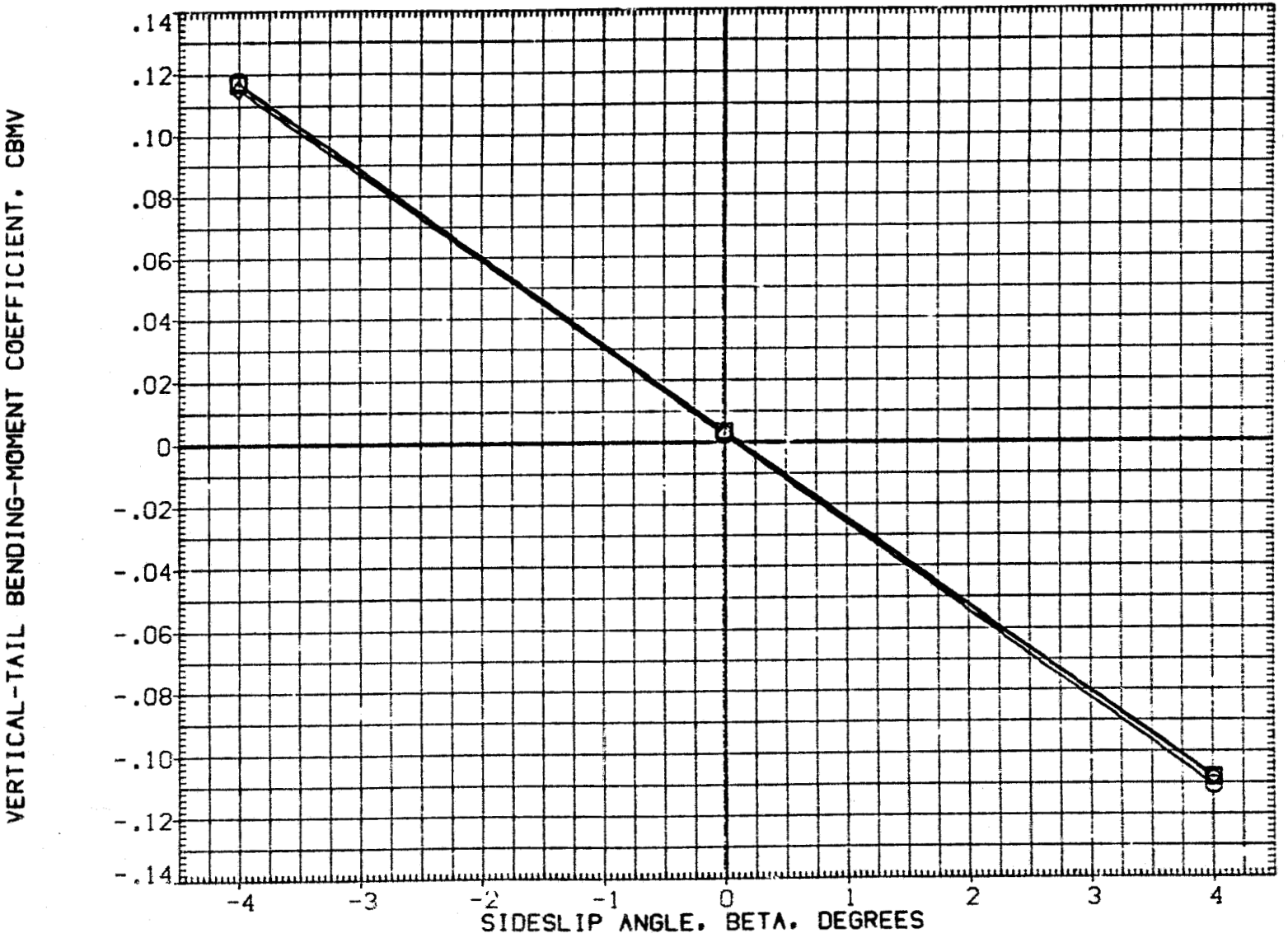



FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y44) | □ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4Y36) | ◇ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

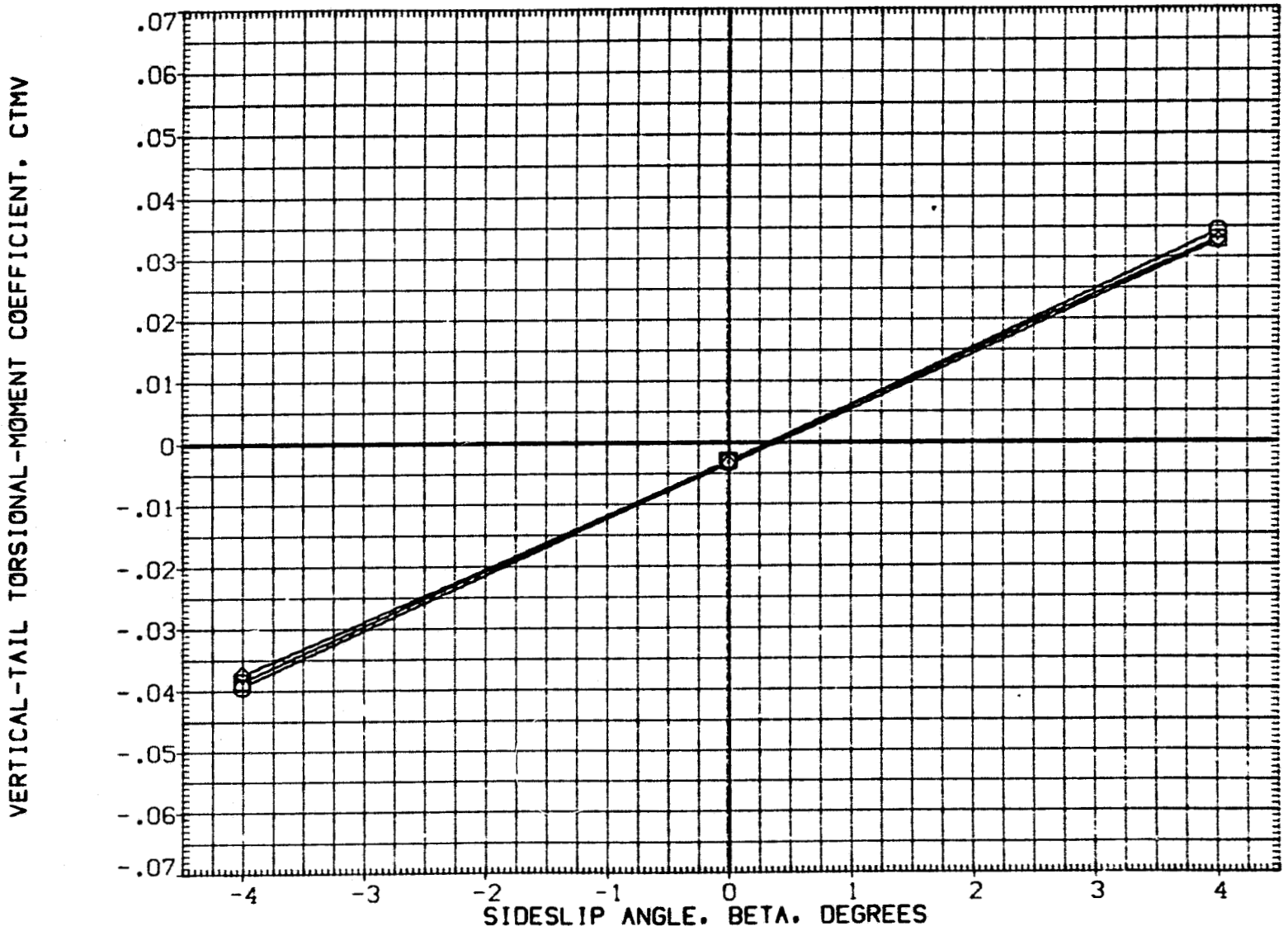



FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y44) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4Y36) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

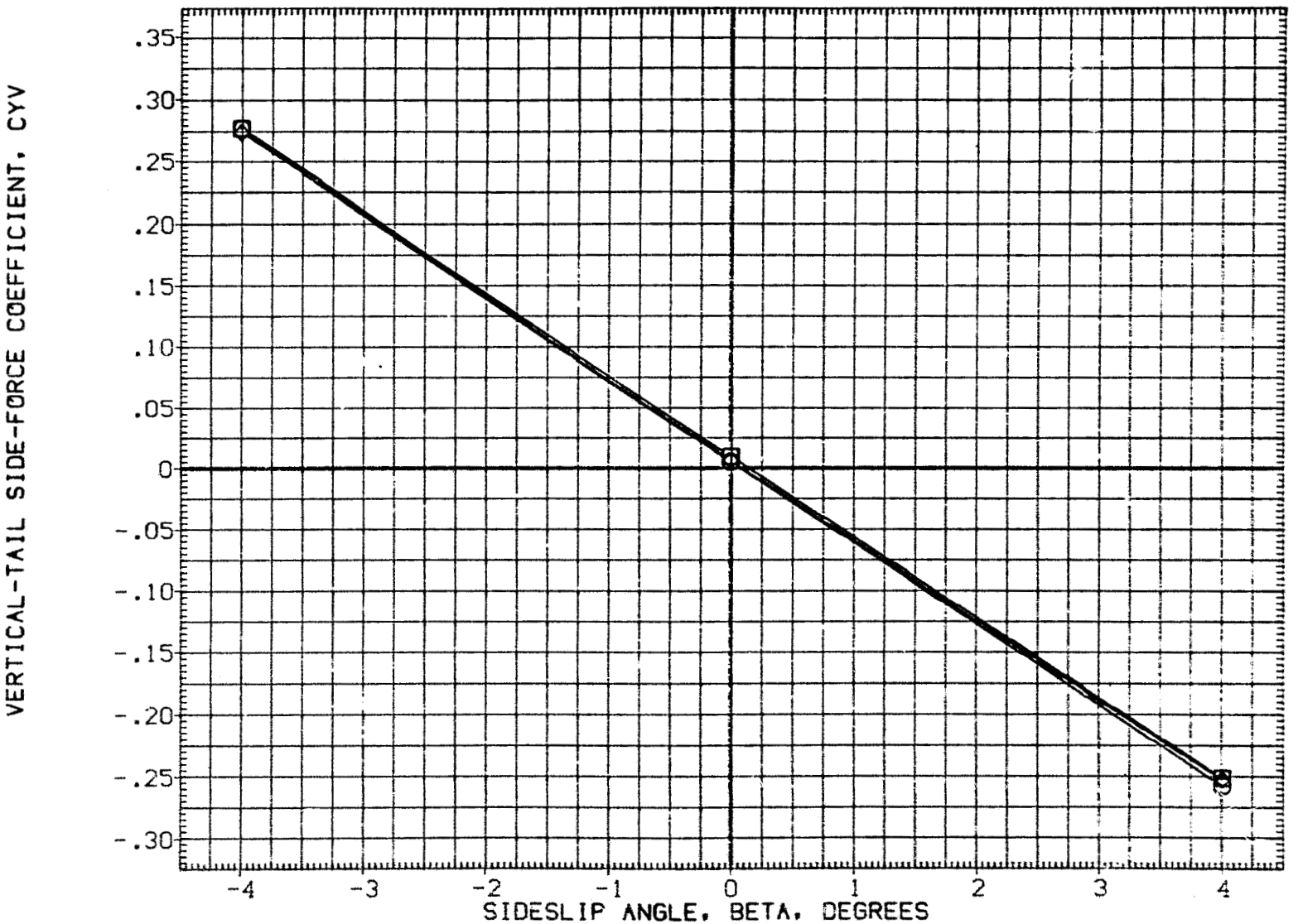



FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y31) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 4.250 |
| (RE4Y44) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 3.250 |
| (RE4Y36) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.250 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

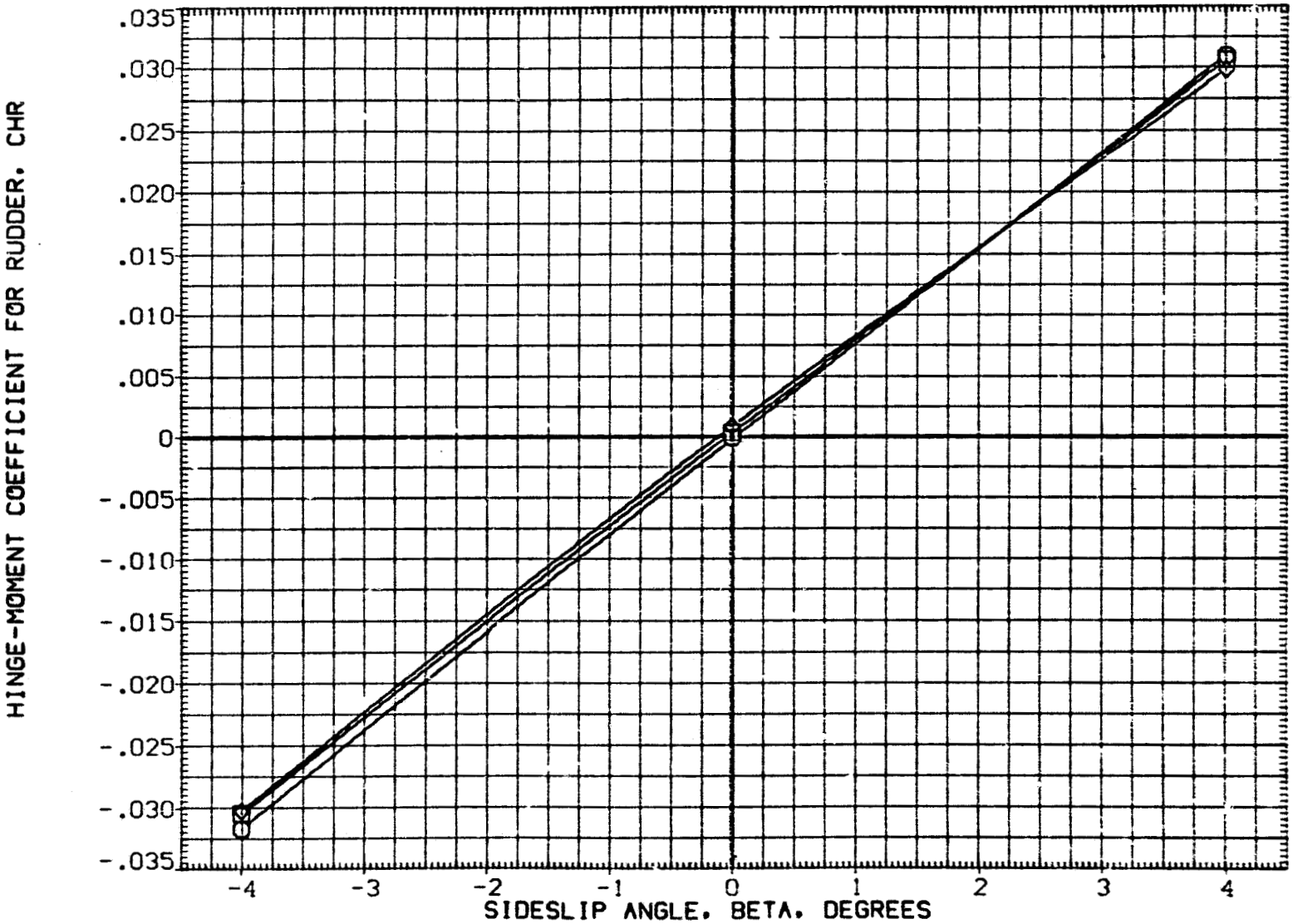



FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y45) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4Y37) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

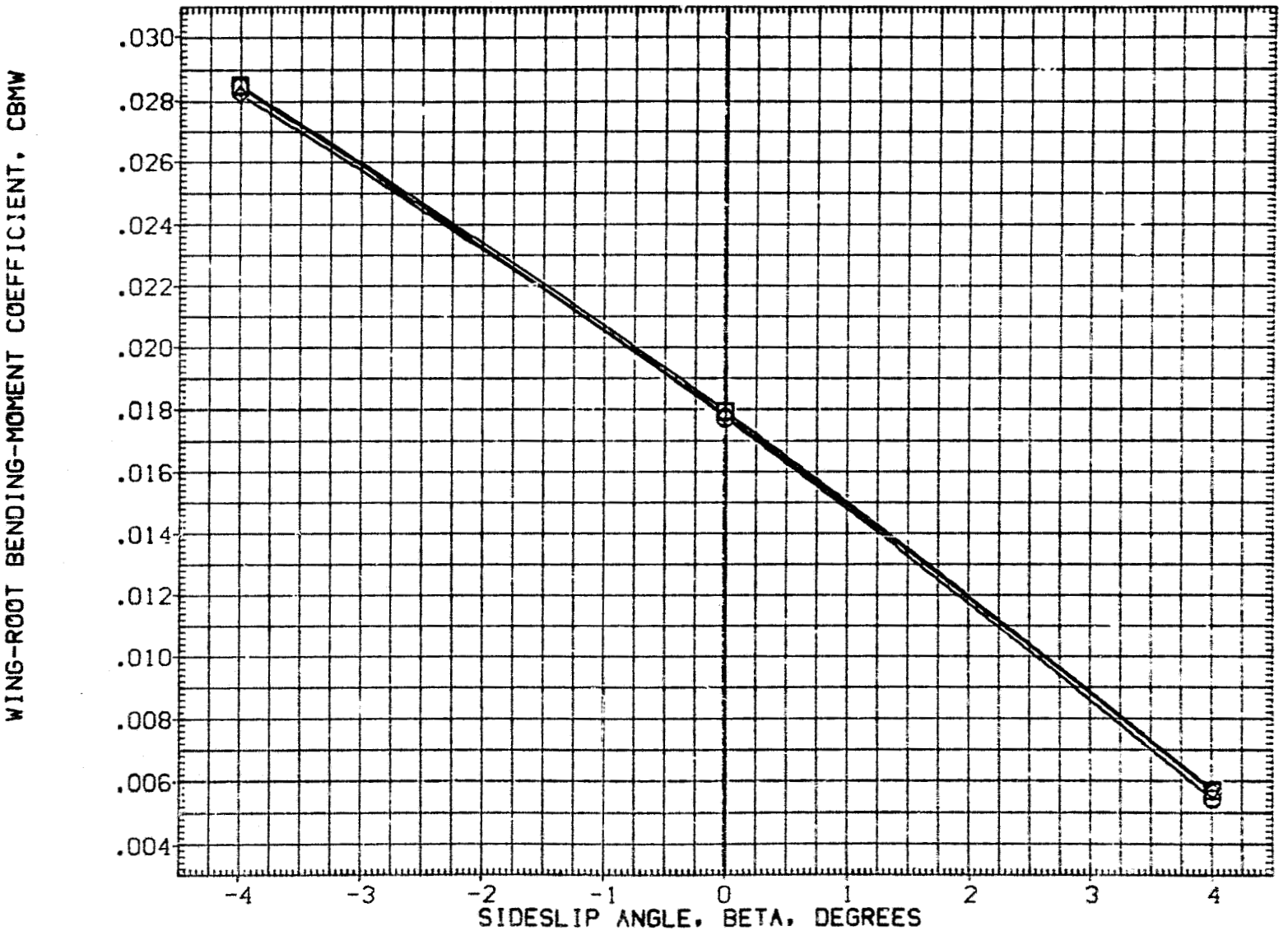



FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ▢ | ARC 11-023 IABO OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y45) | ▢ | ARC 11-023 IABO OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4Y37) | ◇ | ARC 11-023 IABO OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

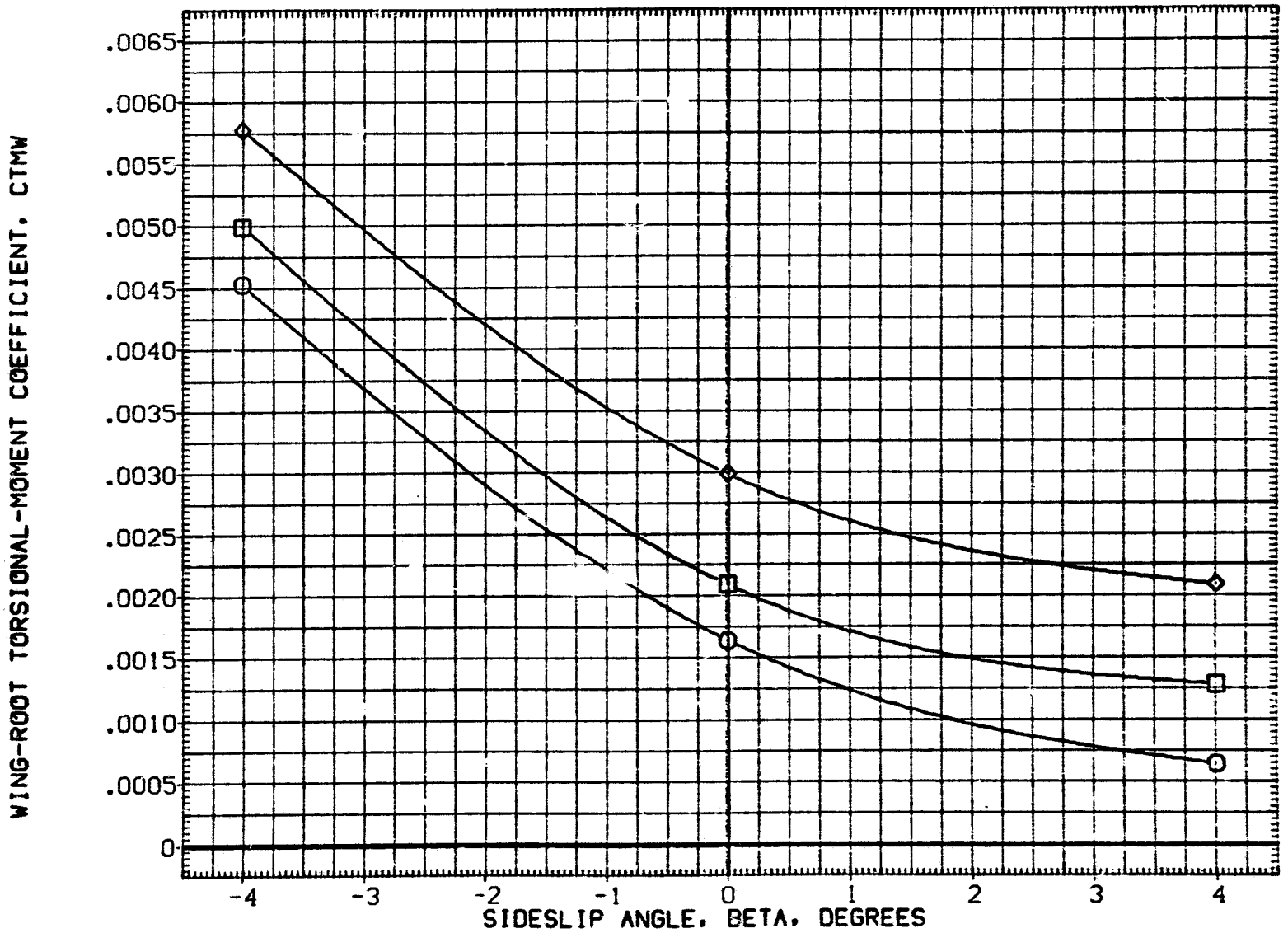



FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y32) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y45) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4Y37) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

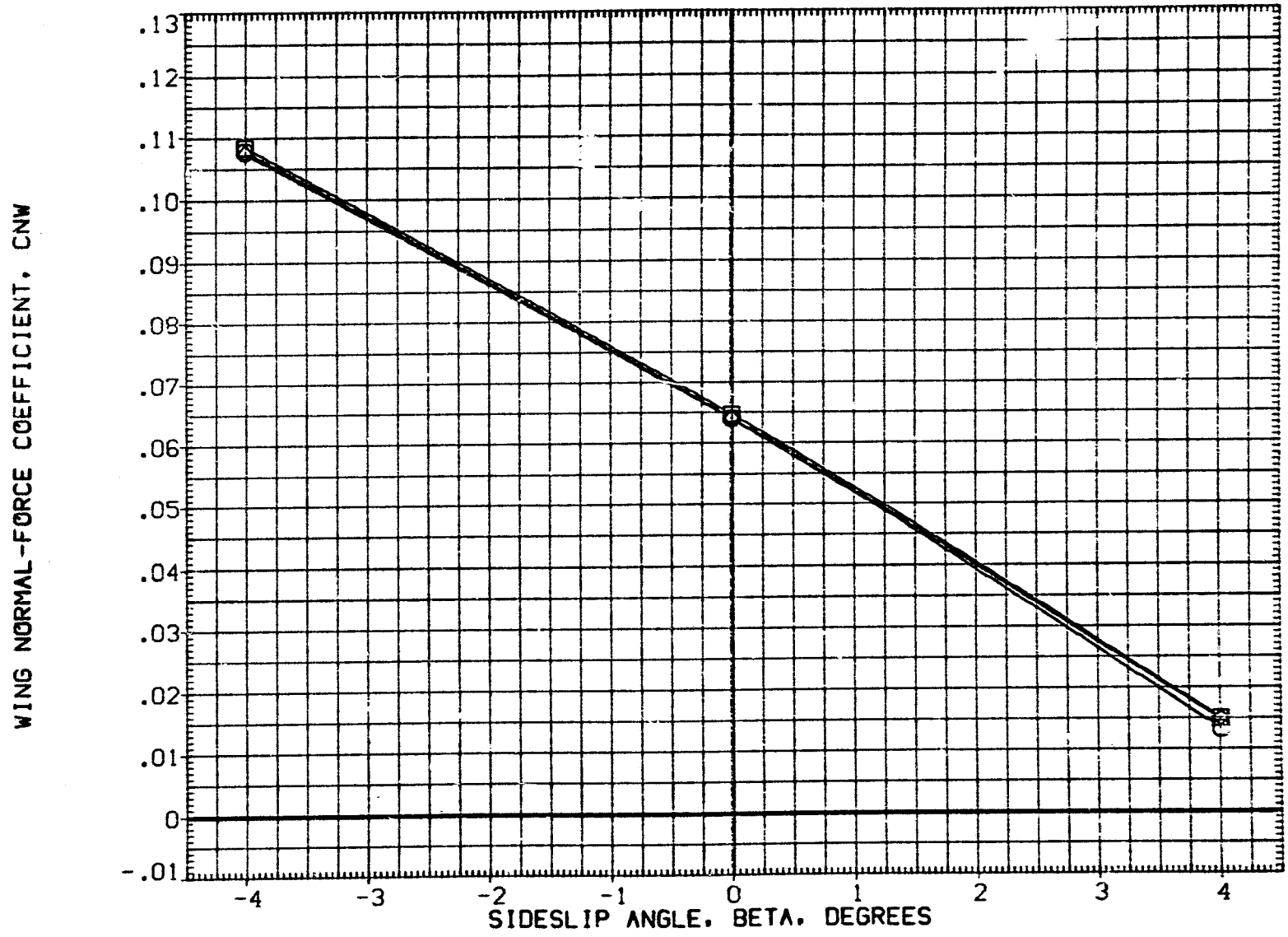



FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y45) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4Y37) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

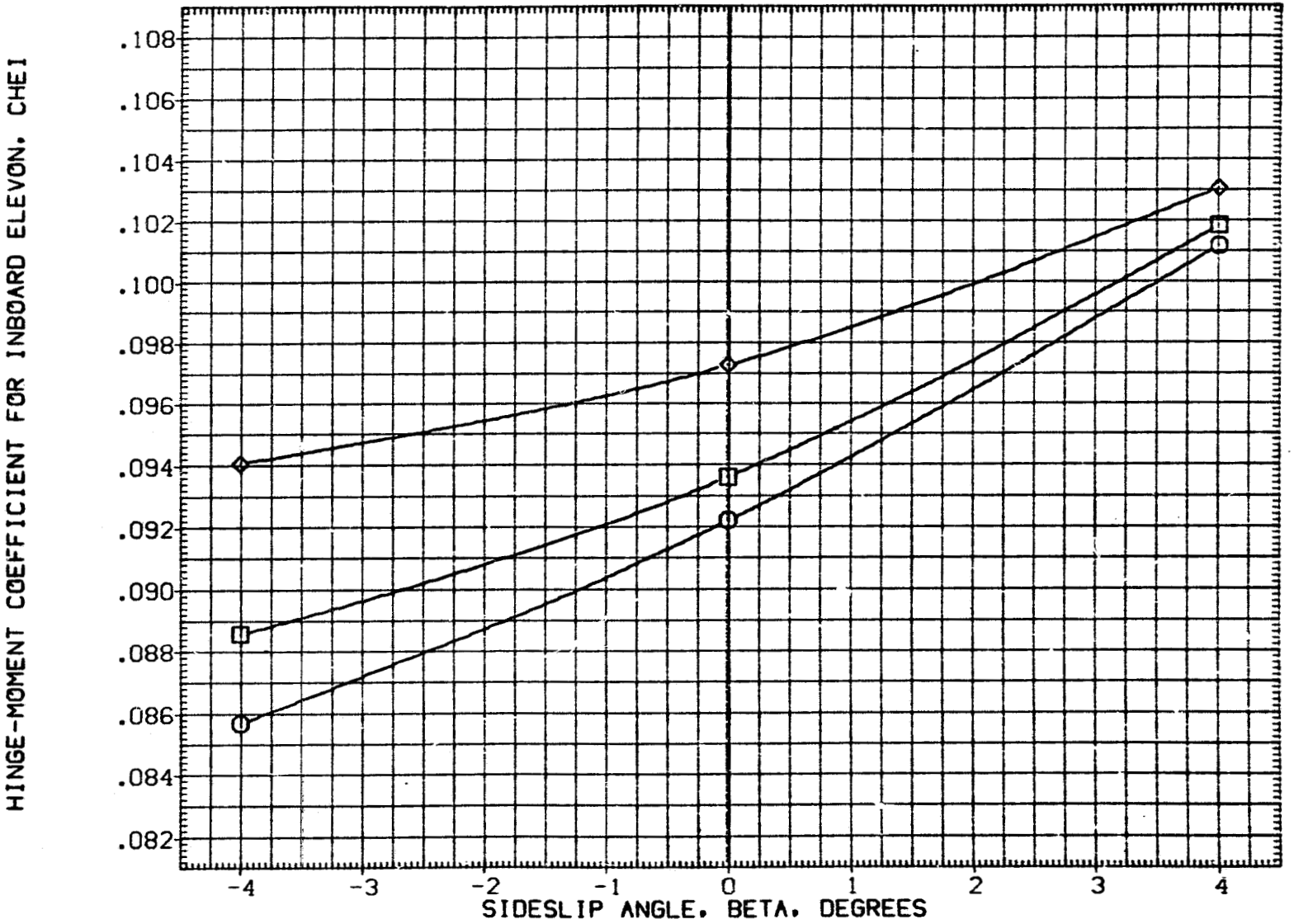



FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y45) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4Y37) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

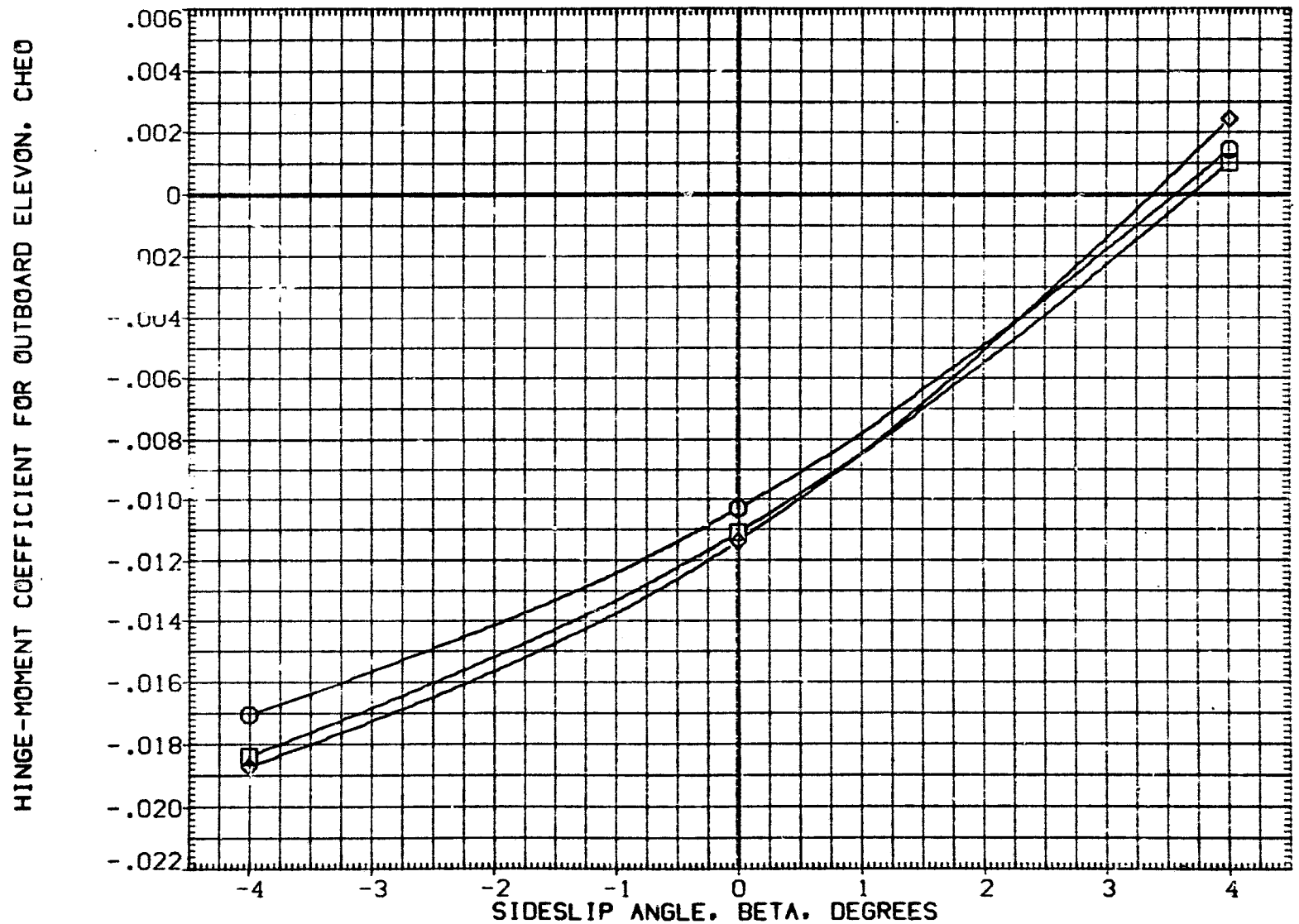



FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y45) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4Y37) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

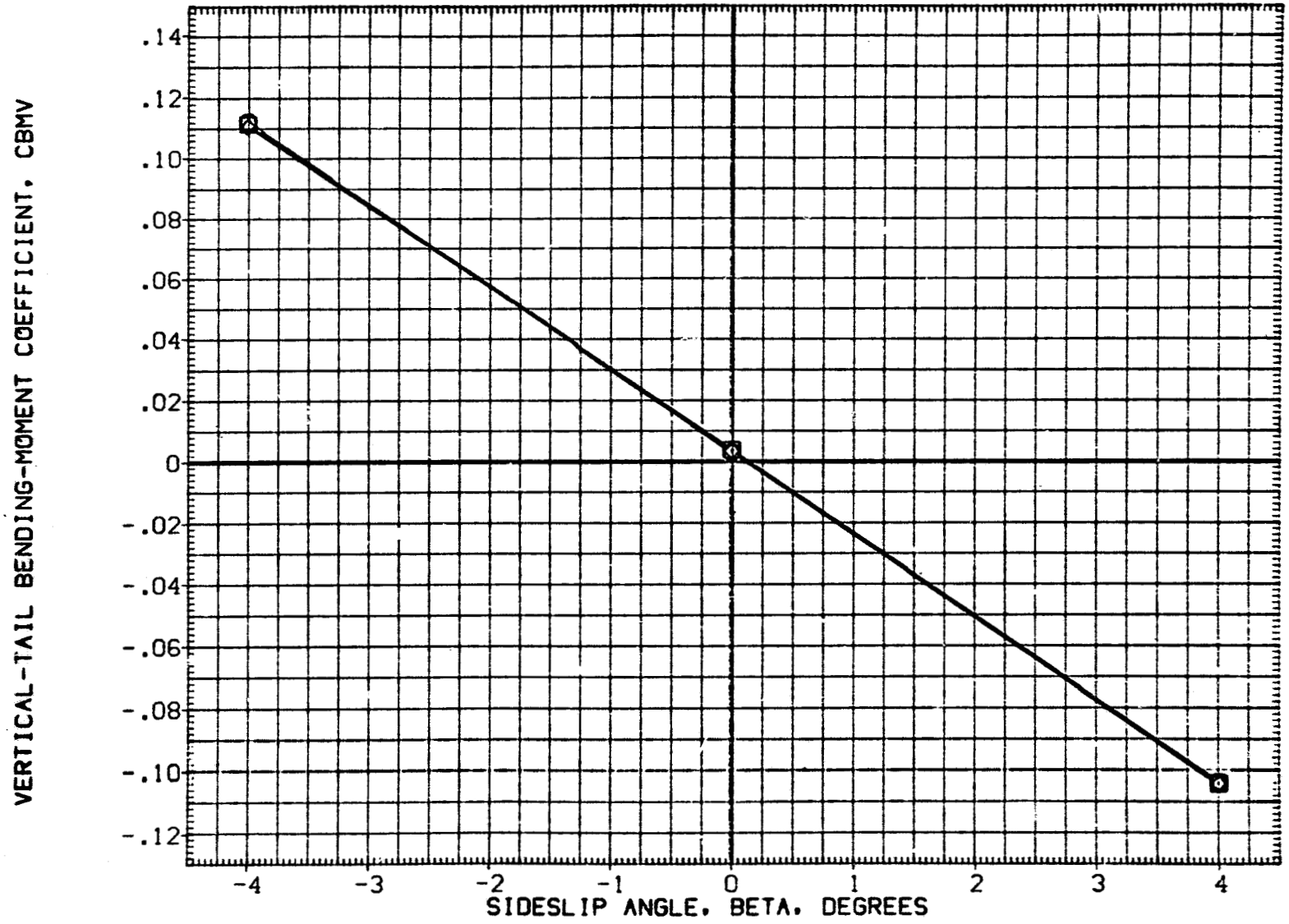



FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y45) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4Y37) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0700 | |

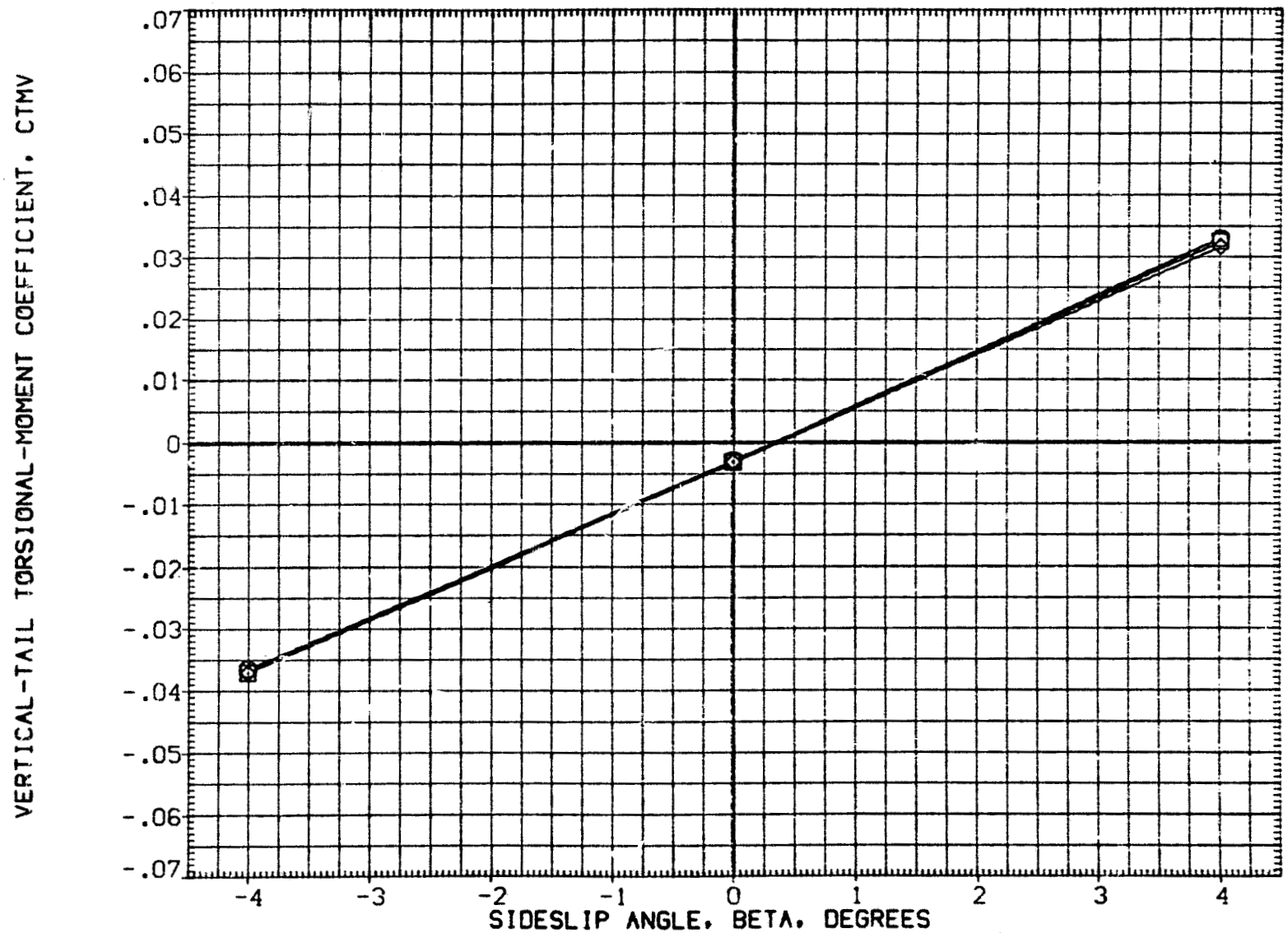



FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y45) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4Y37) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

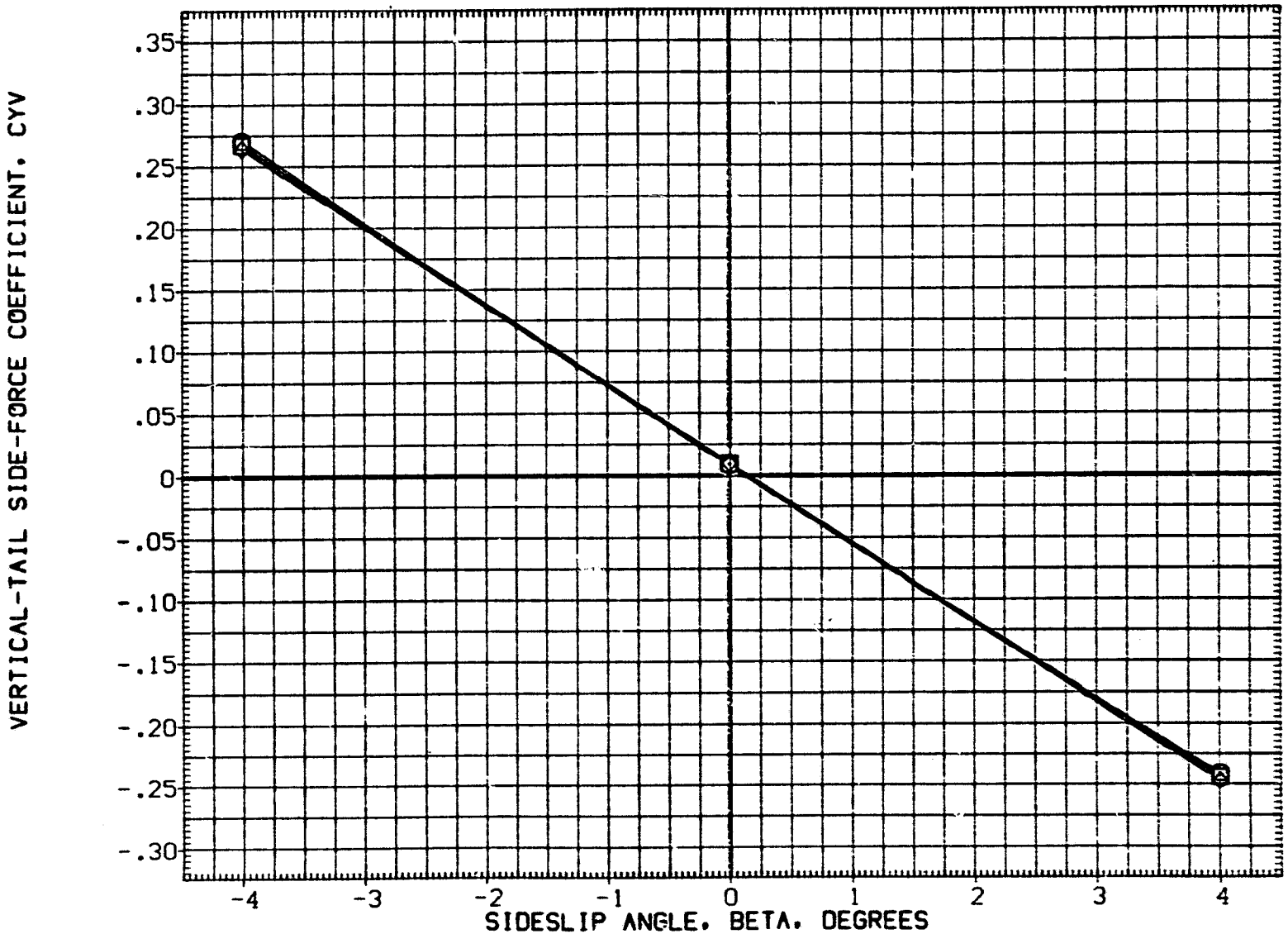



FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y32) | ○ | ARC 11-023 (A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 4.250 |
| (RE4Y45) | □ | ARC 11-023 (A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 3.250 |
| (RE4Y37) | ◇ | ARC 11-023 (A80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 1.400 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0000 | |

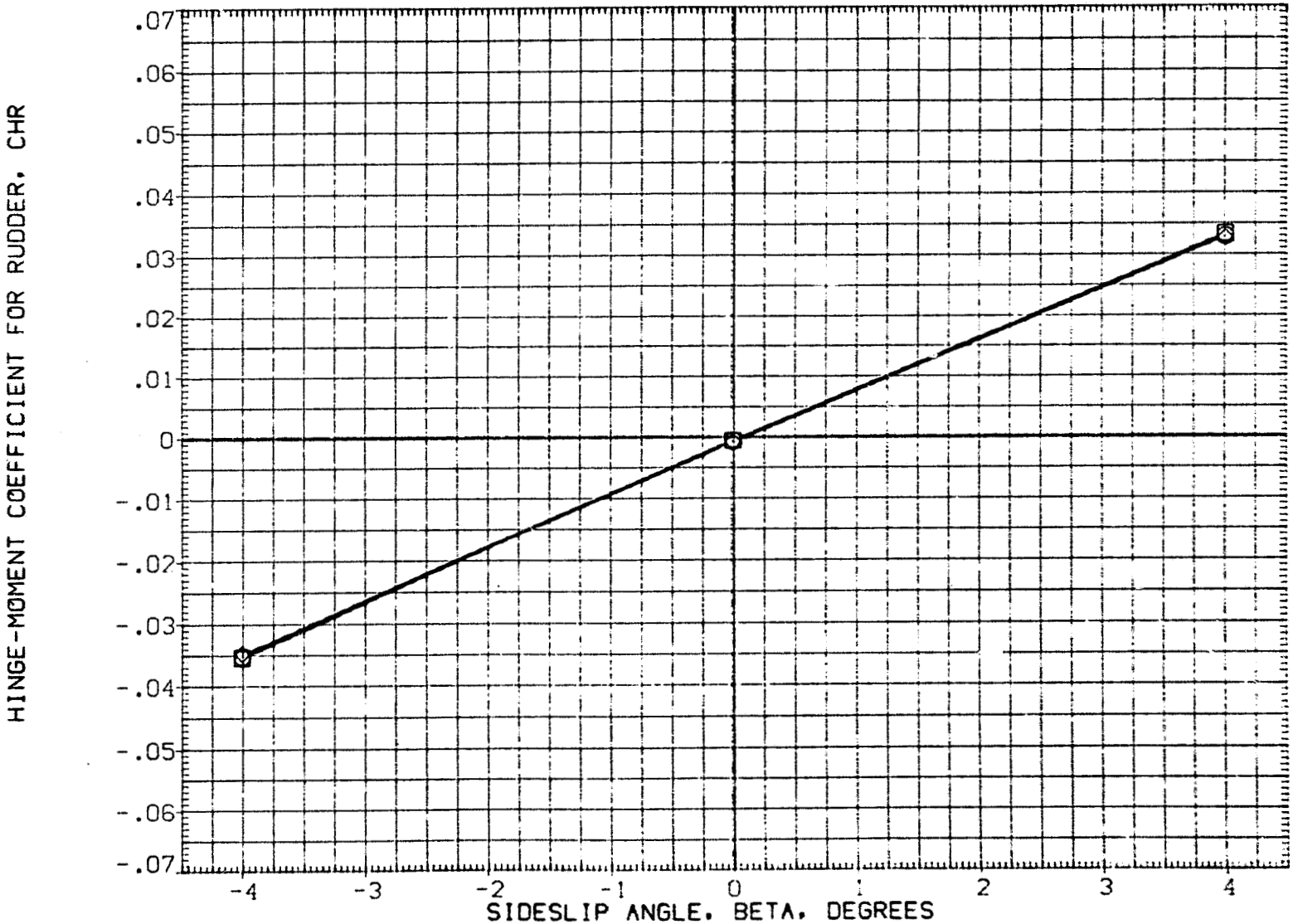



FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X46) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4X38) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

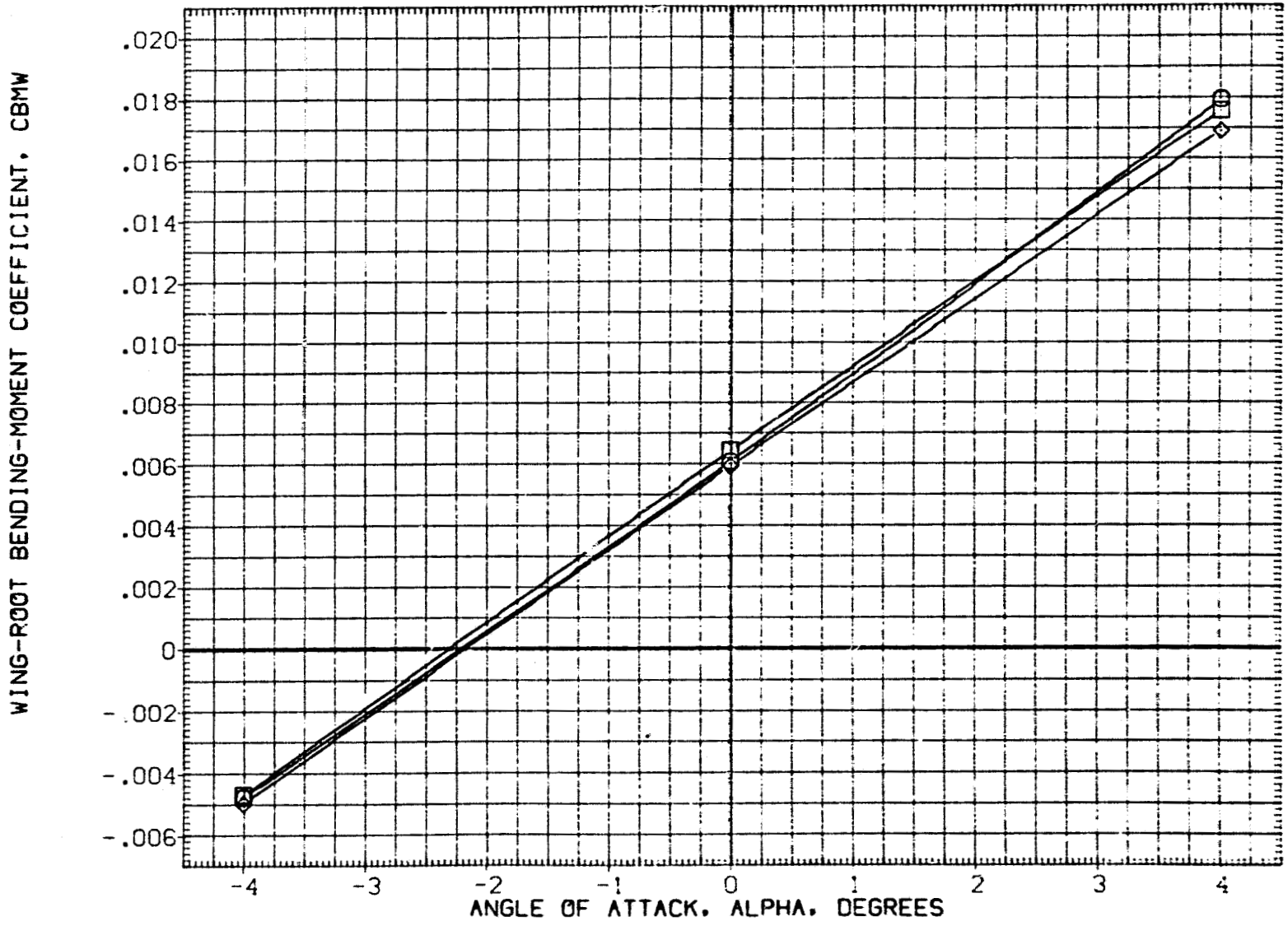



FIG. 104 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X46) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4X38) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

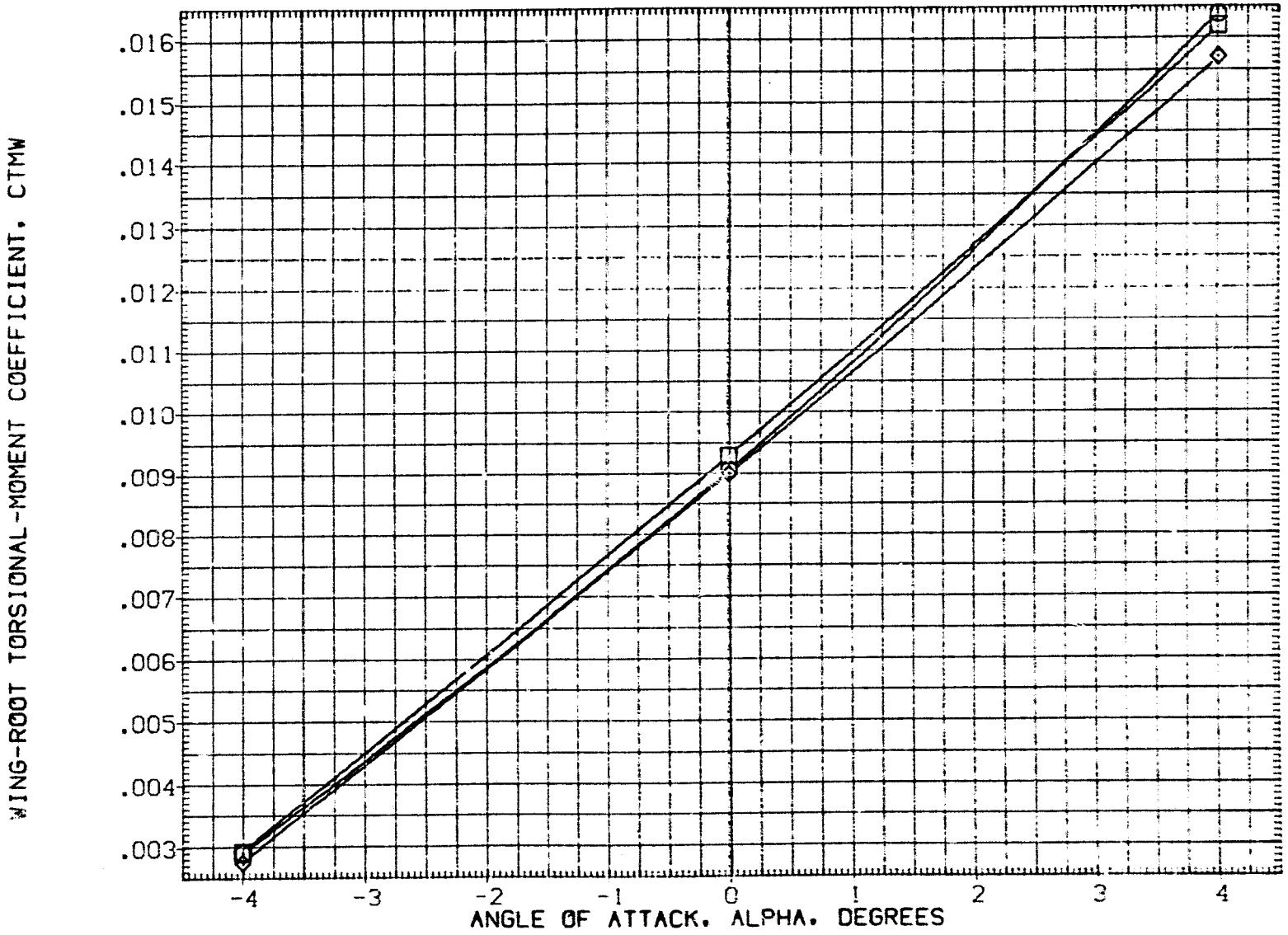



FIG. 104 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X46) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4X38) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

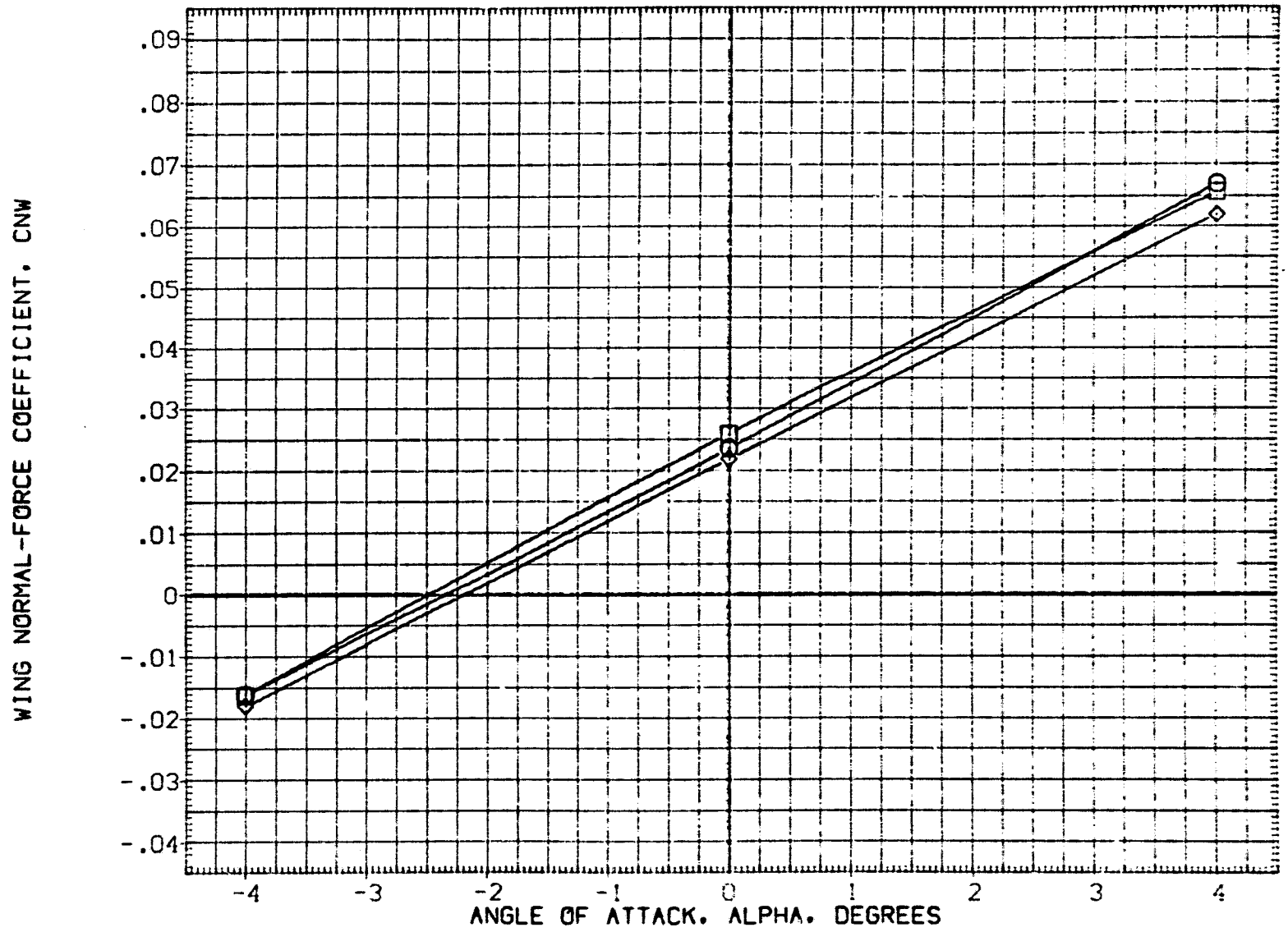



FIG. 104 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X20) | ARC 11-023 (A80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X46) | ARC 11-023 (A80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4X38) | ARC 11-023 (A80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0700 | |

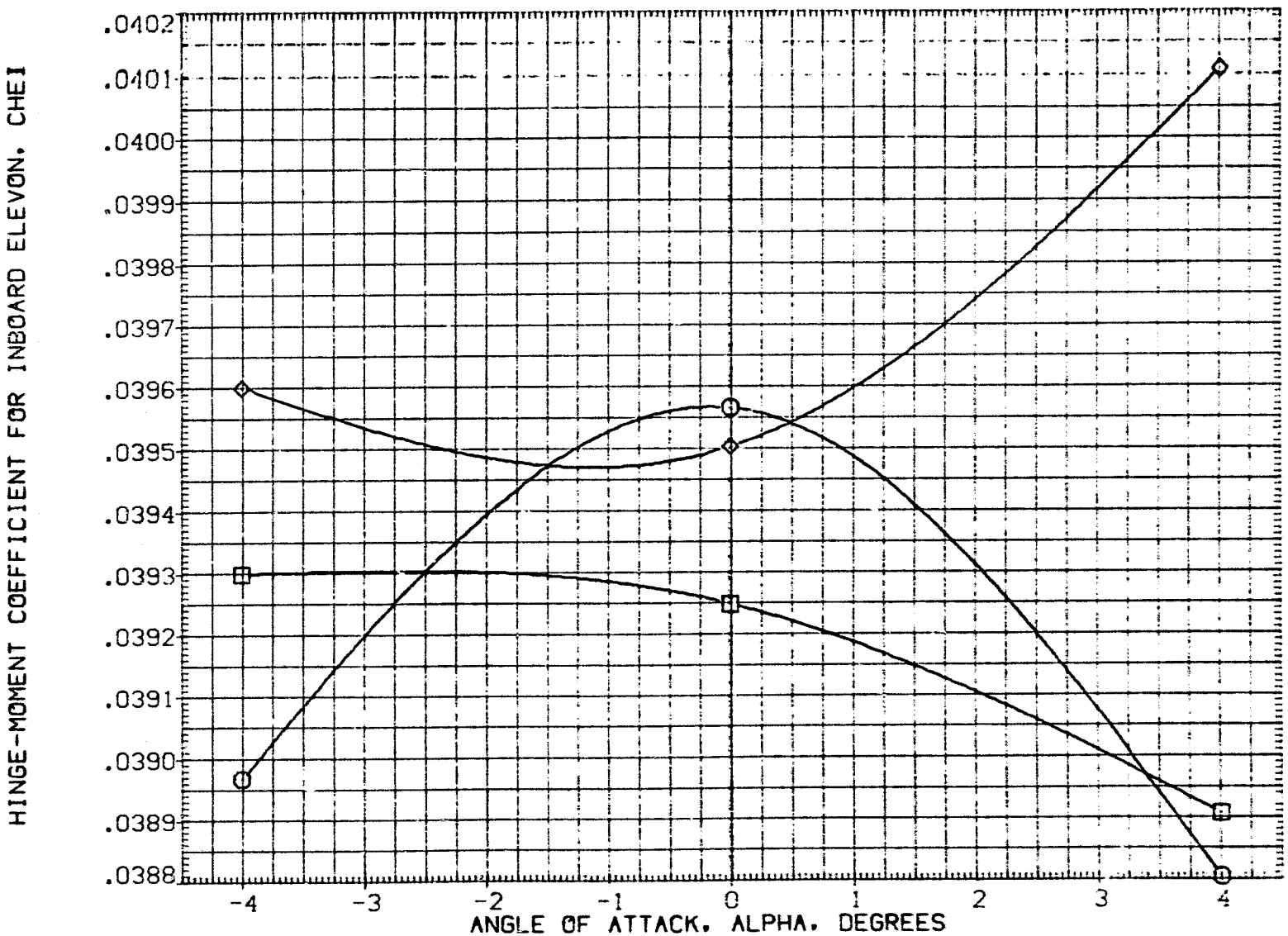



FIG. 104 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X20) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4X46) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4X38) ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

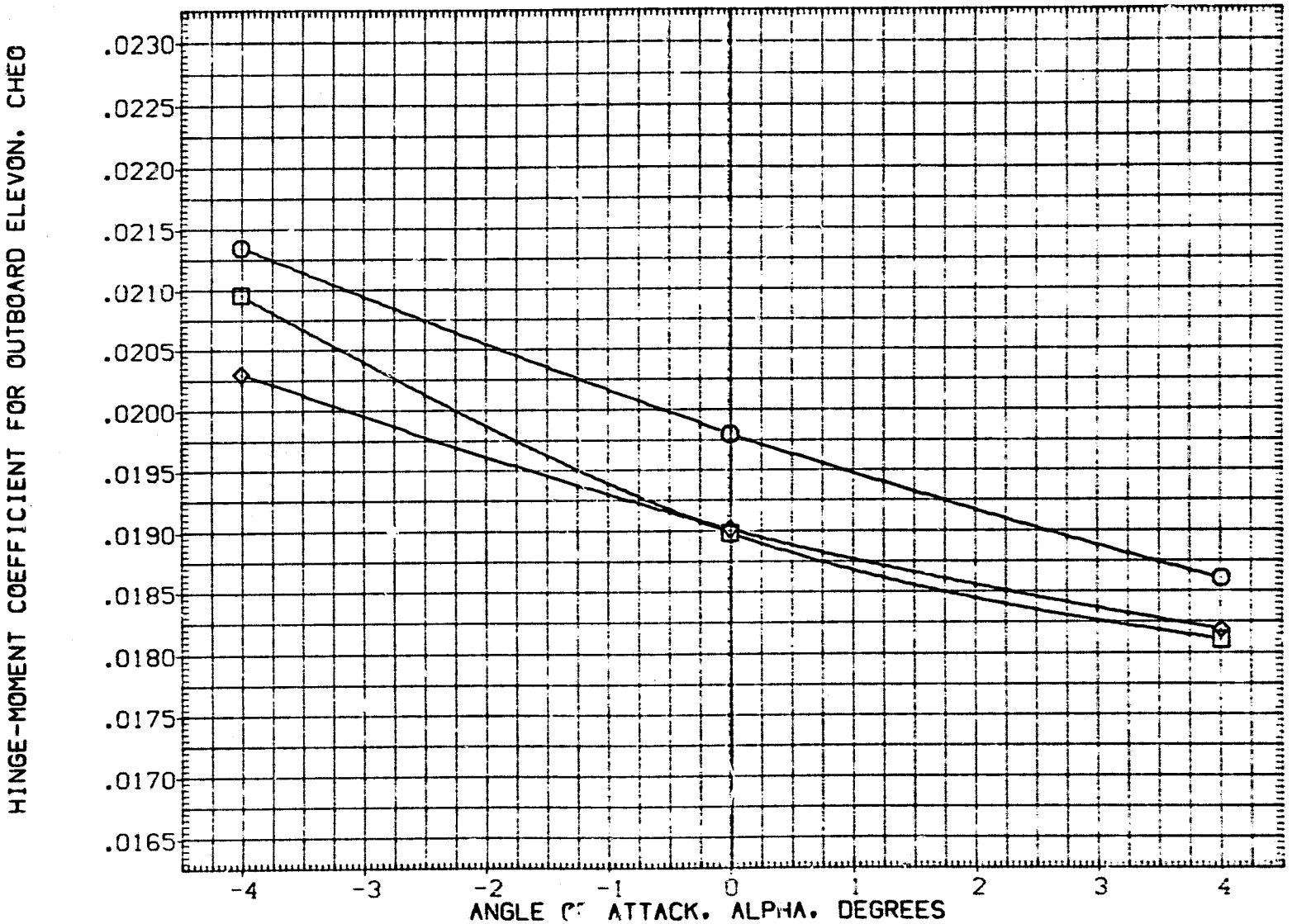



FIG. 104 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X47) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4X39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

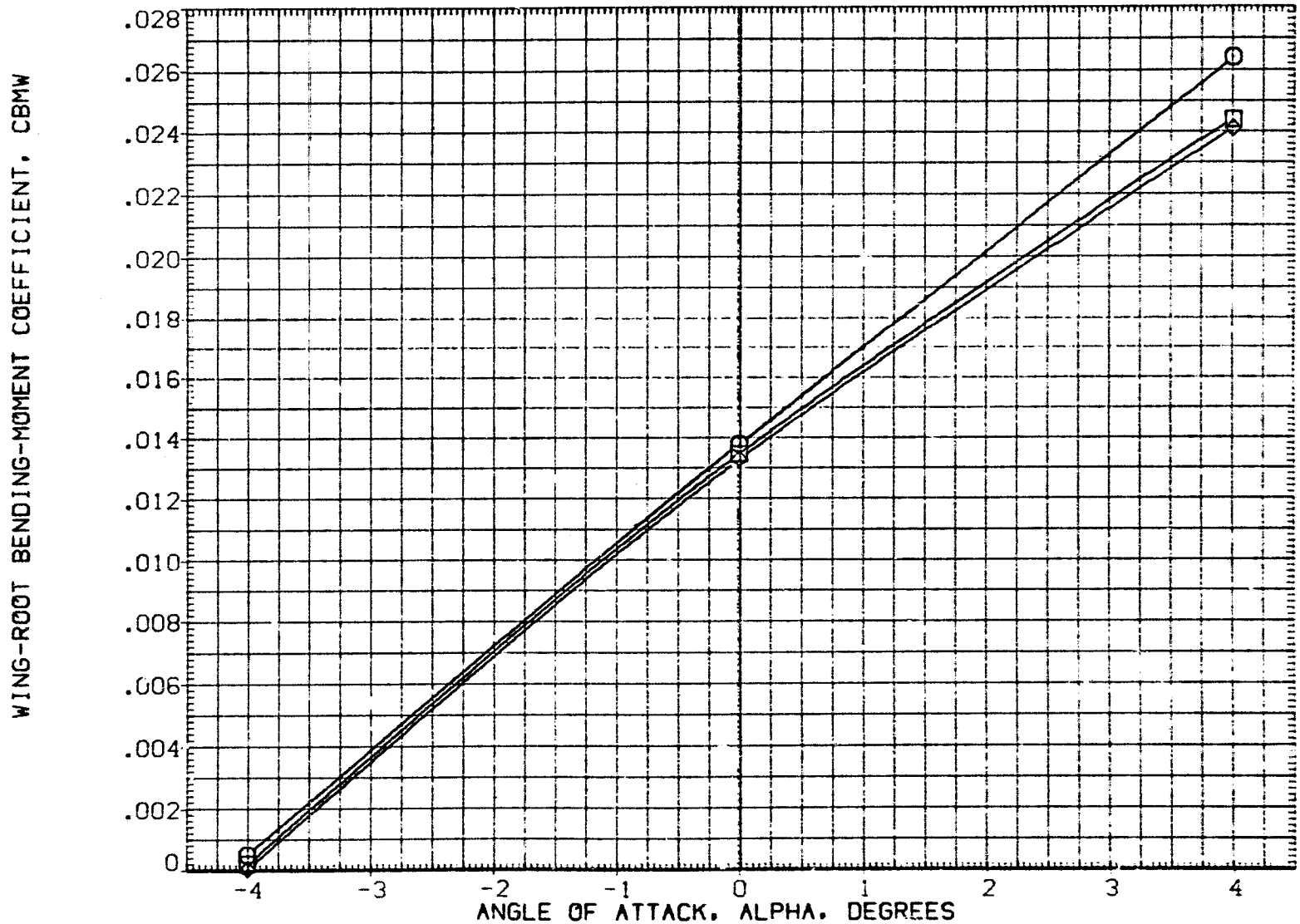



FIG. 105 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X47) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4X39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

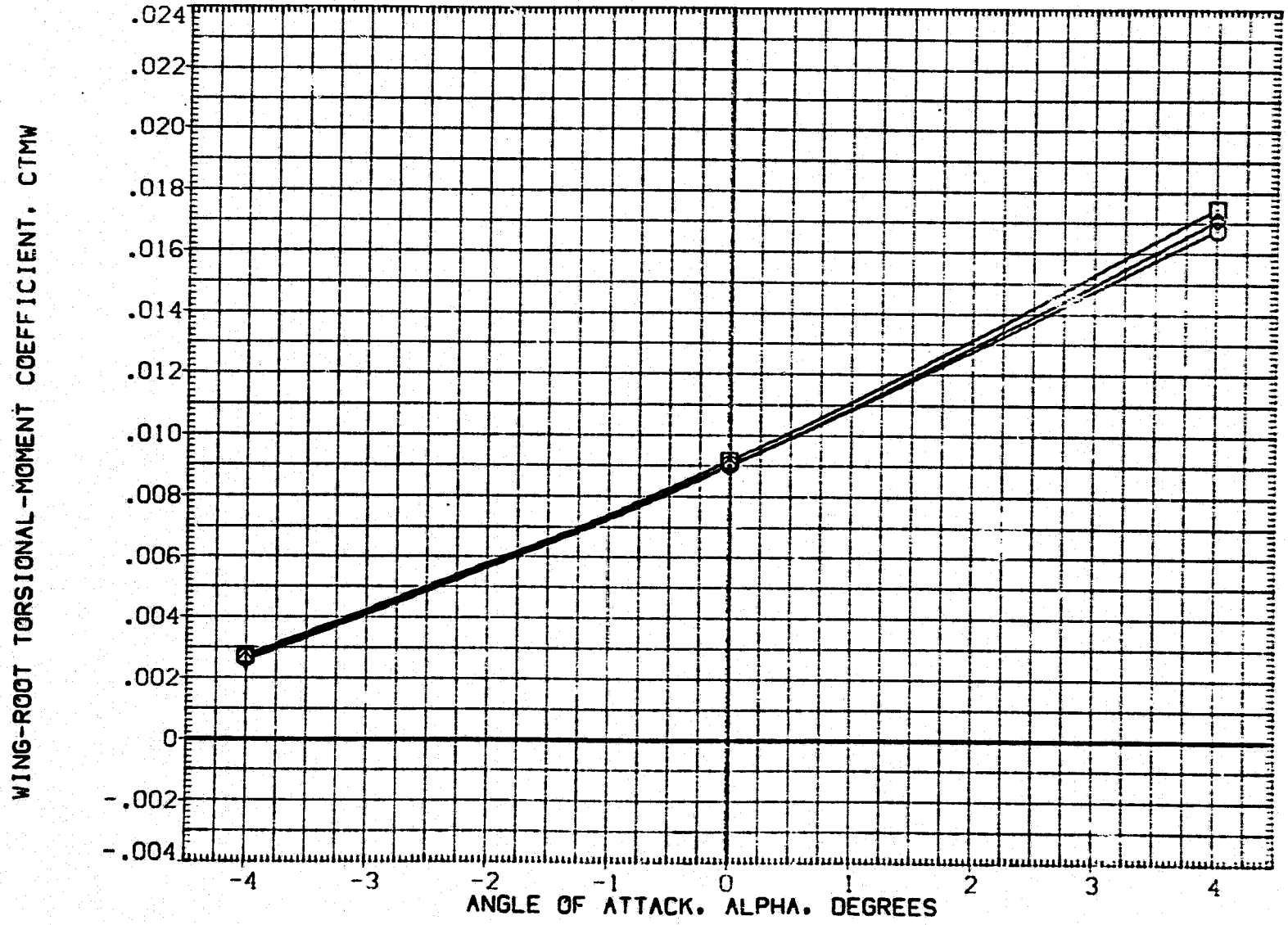



FIG. 105 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X47) | ◻ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4X39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

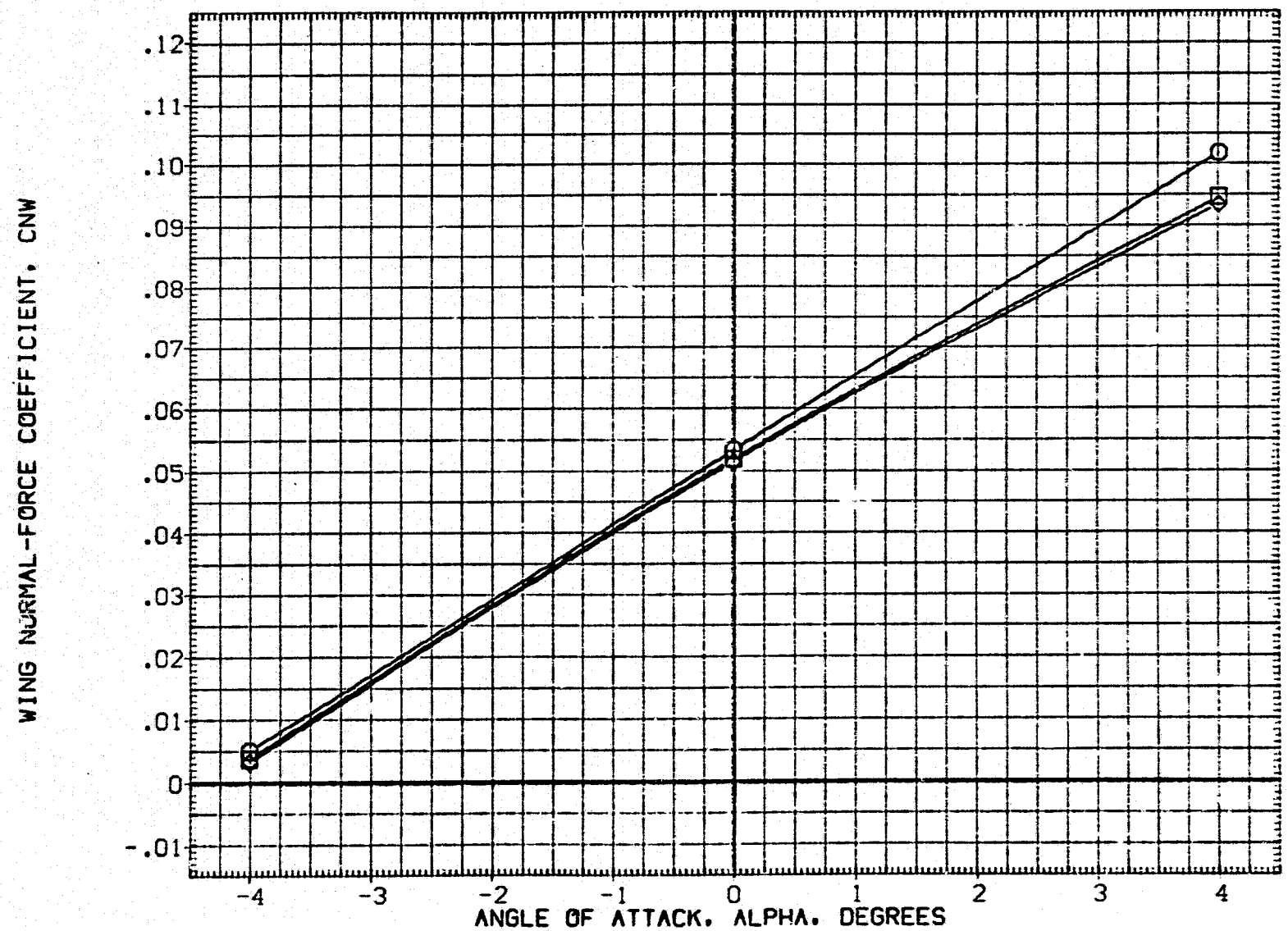



FIG. 105 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X47) | ⊡ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4X39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

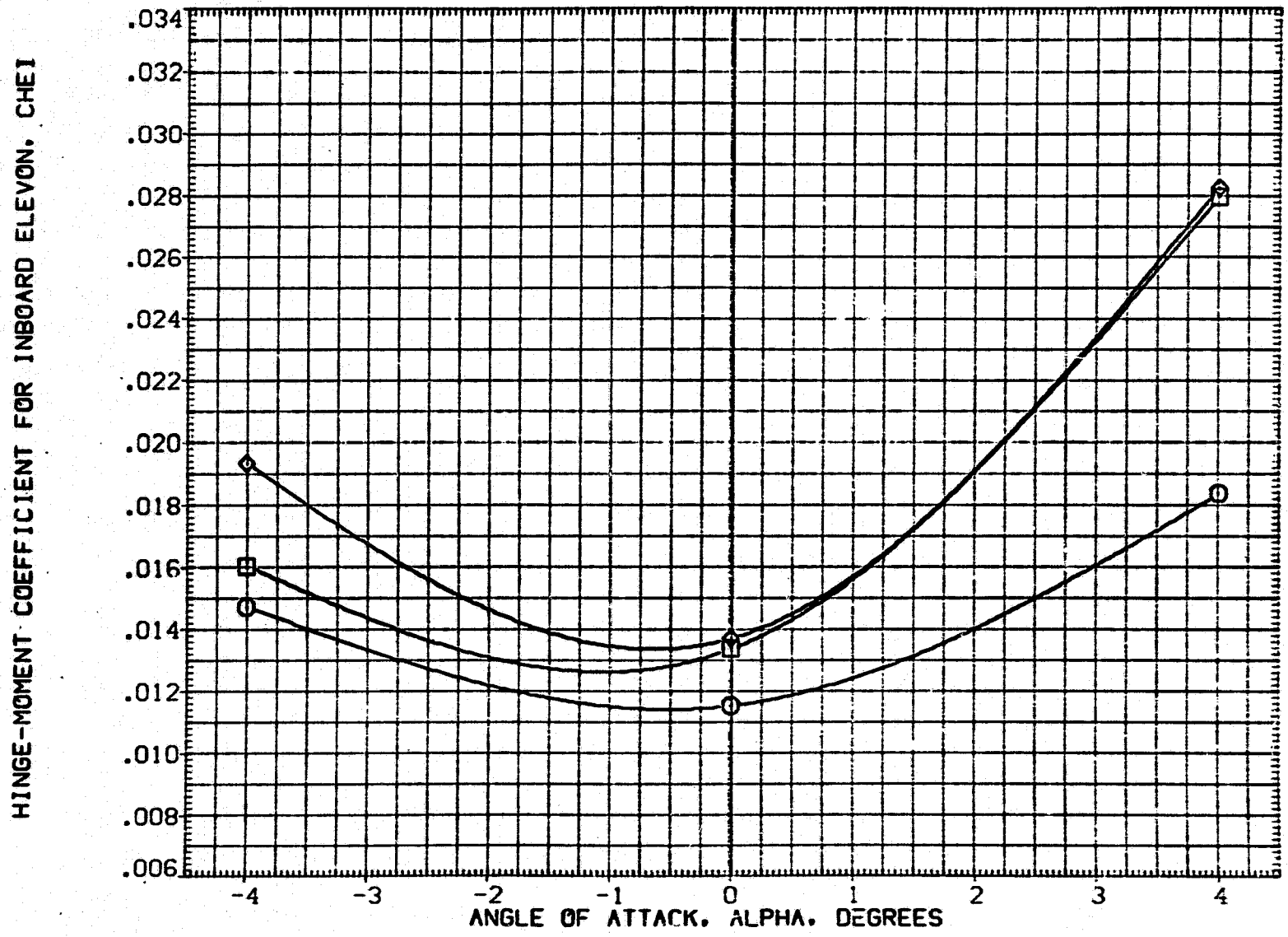



FIG. 105 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X21) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4X47) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4X39) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

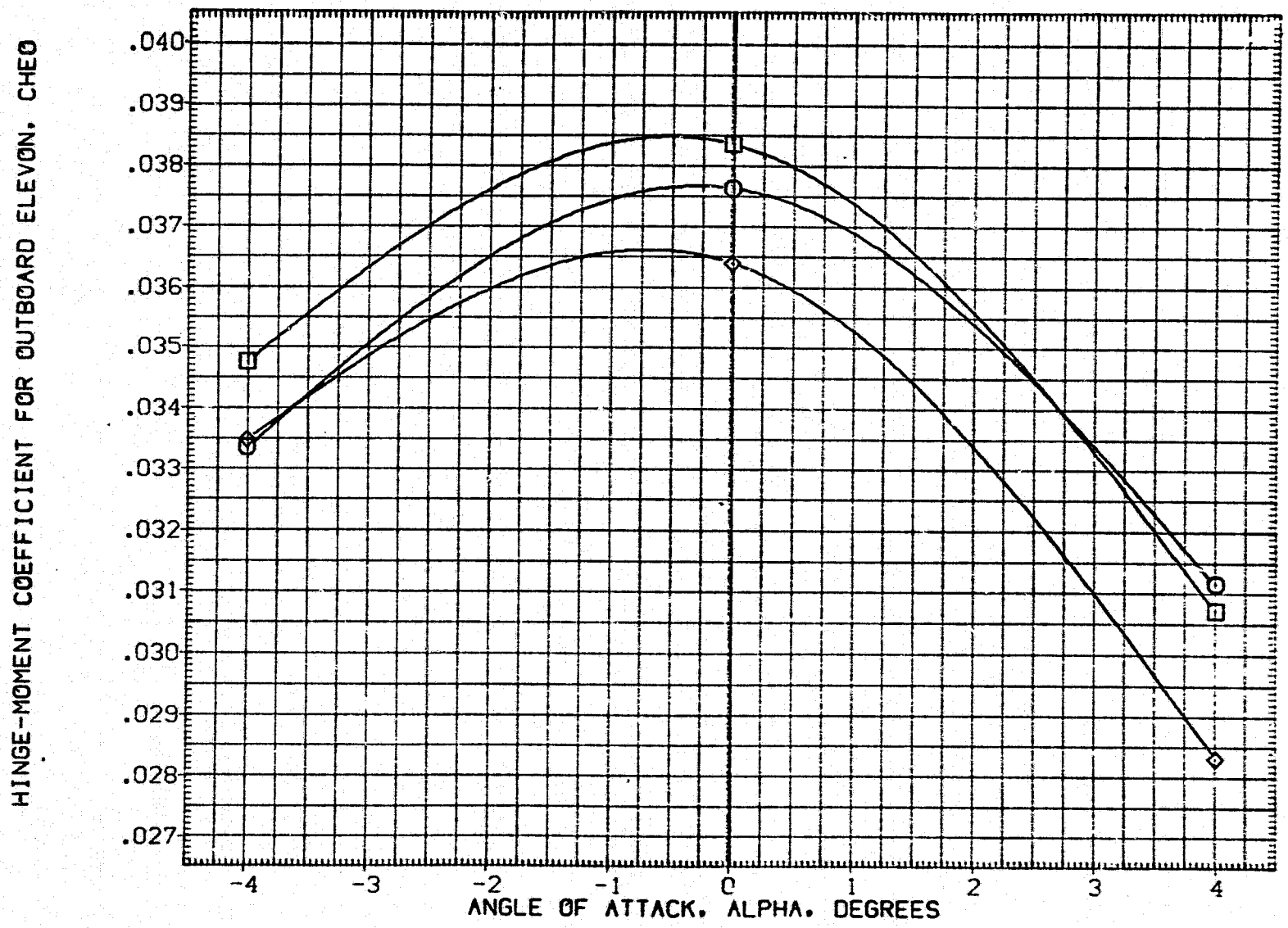



FIG. 105 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X48) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4X40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

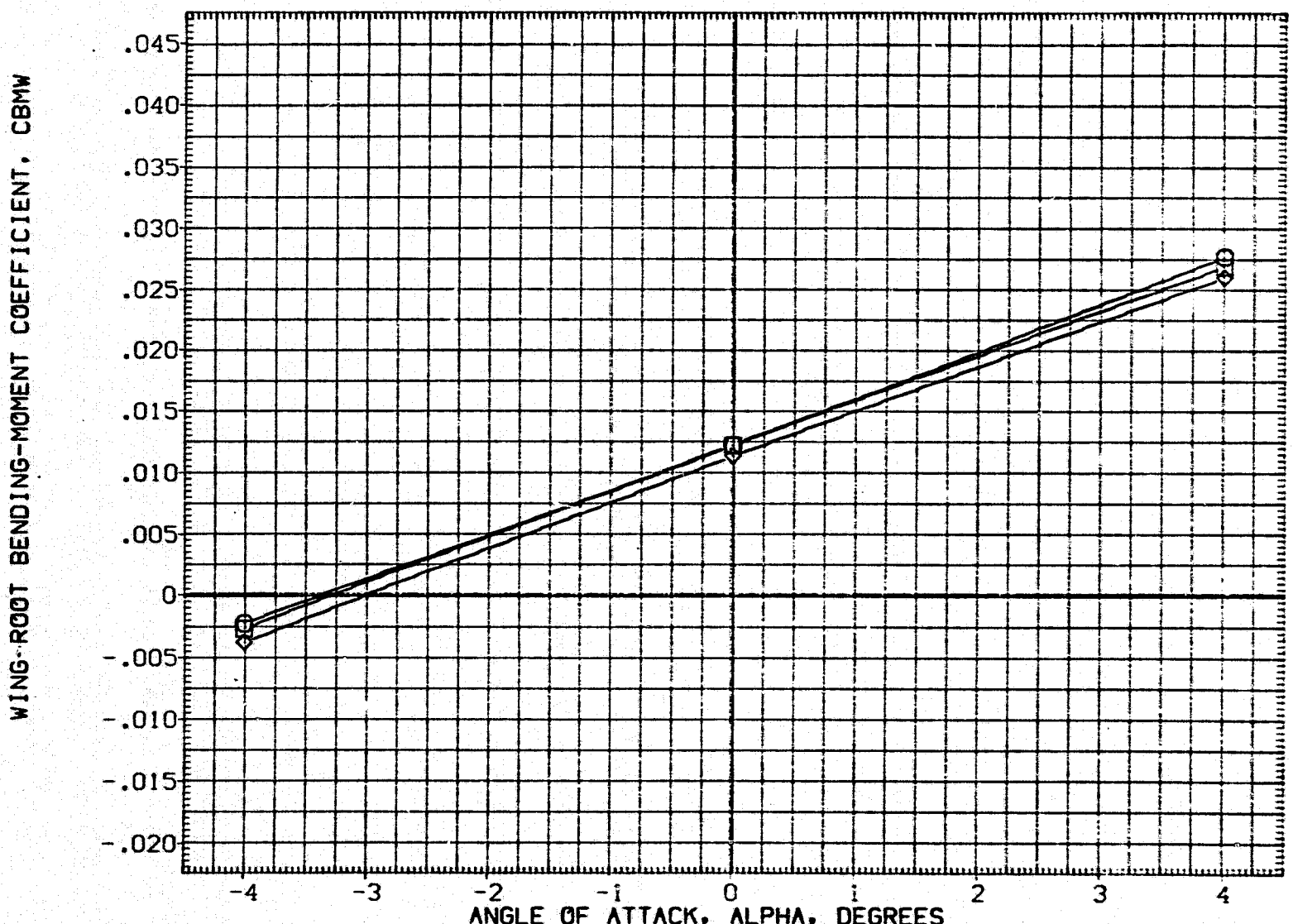



FIG. 106 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4X22) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X48) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4X40) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

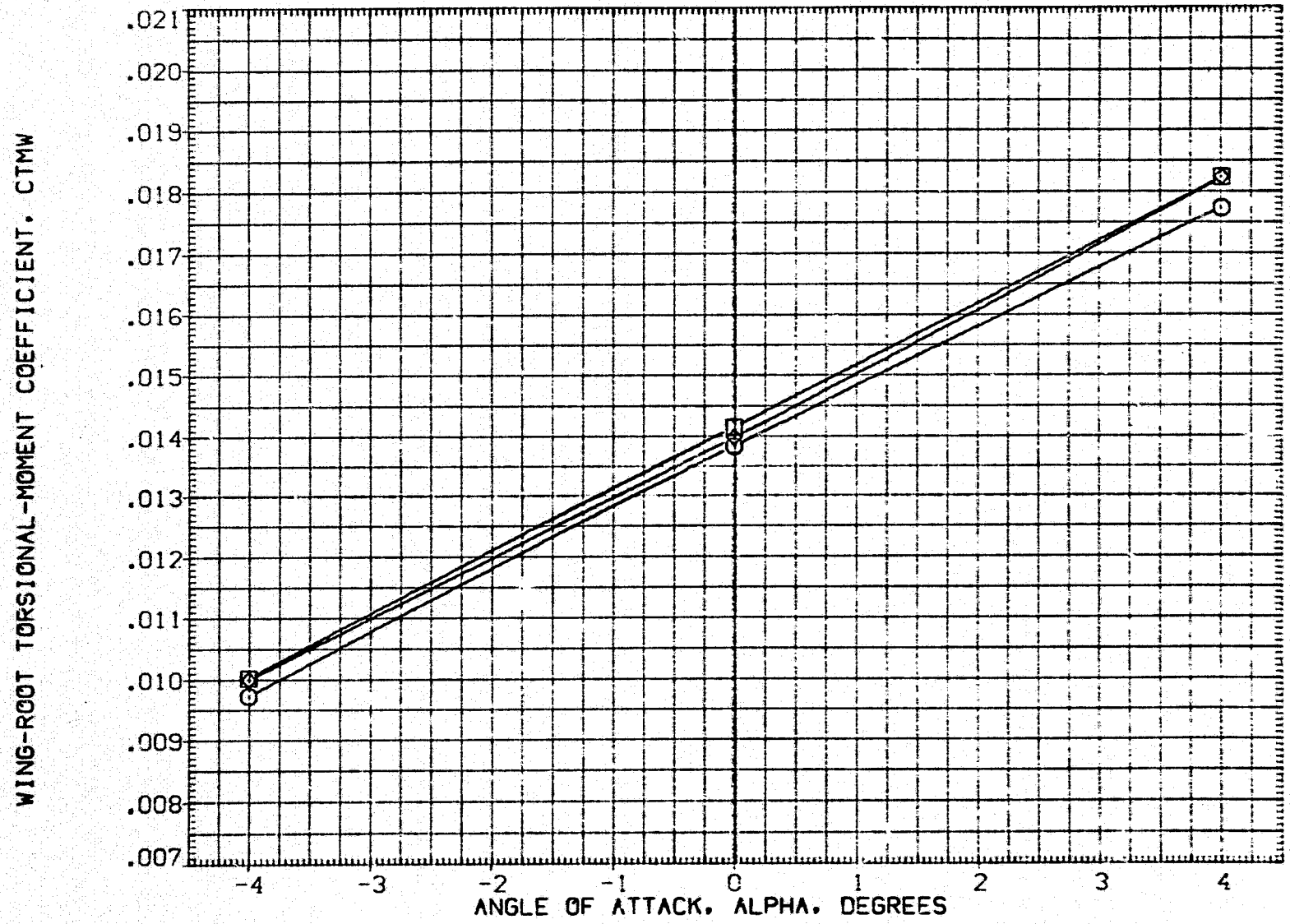



FIG. 106 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X48) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4X40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

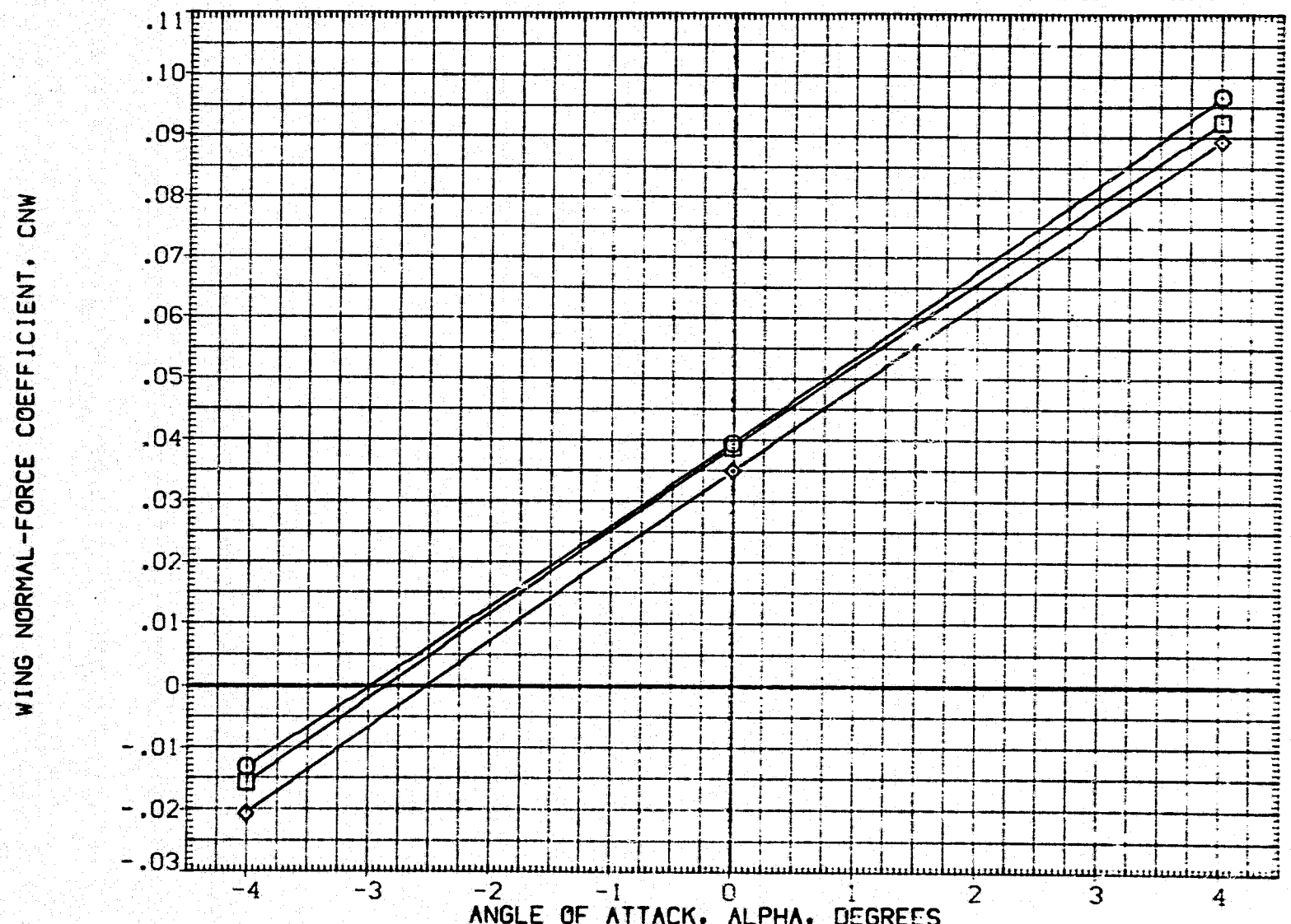



FIG. 106 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X48) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4X40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

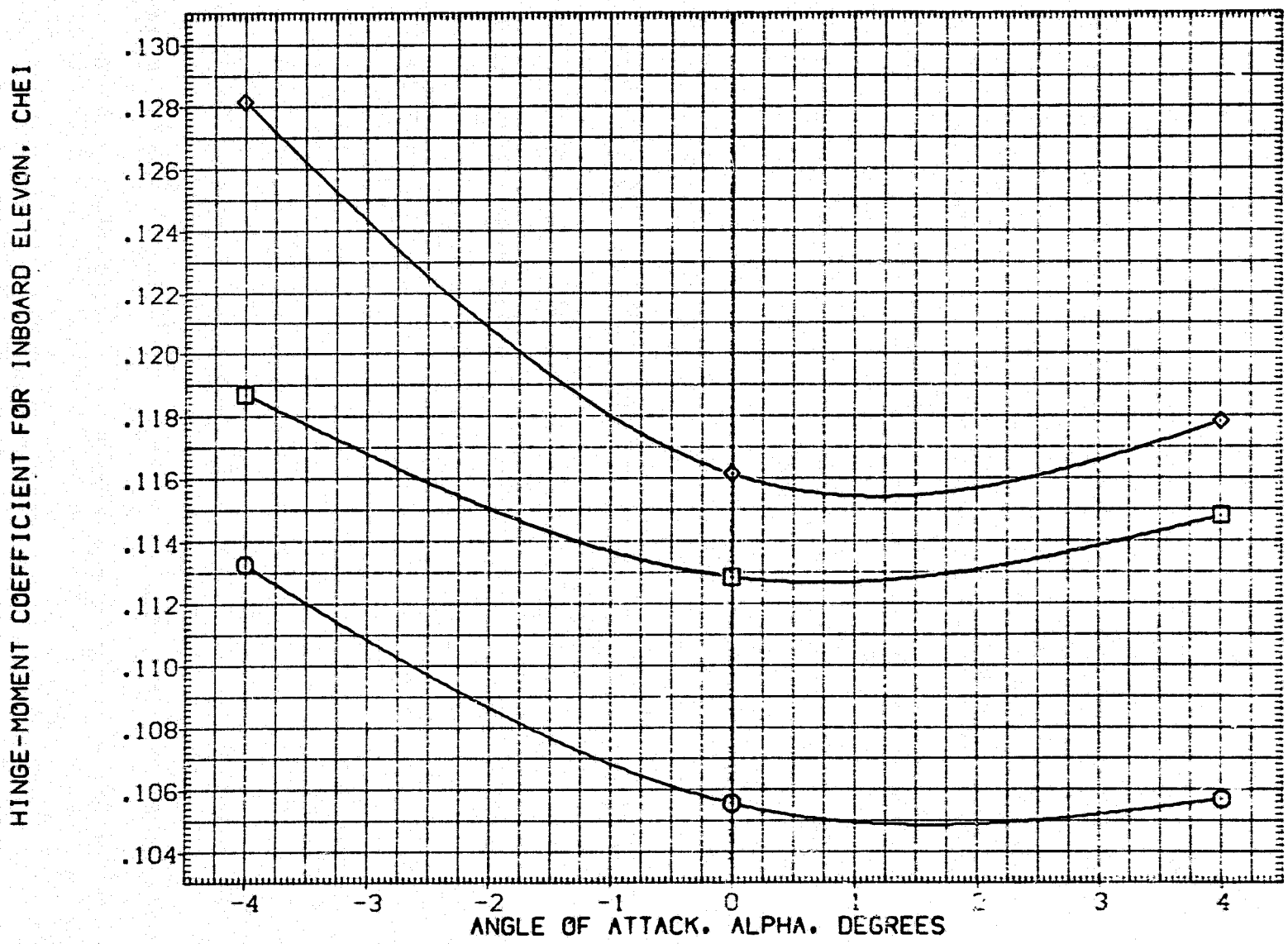



FIG. 106 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4X22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4X48) | ⊡ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4X40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

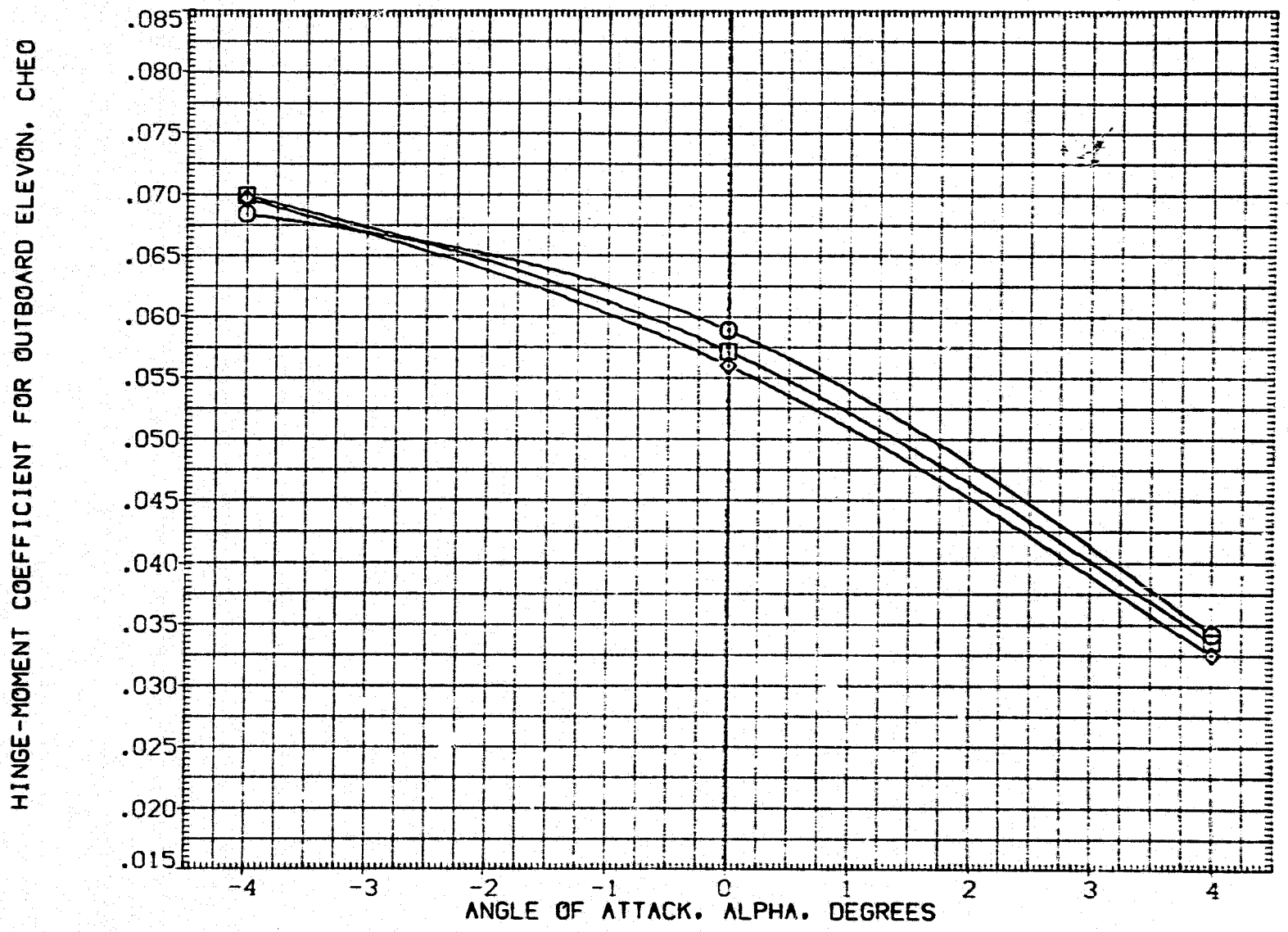



FIG. 106 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y46) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4Y38) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

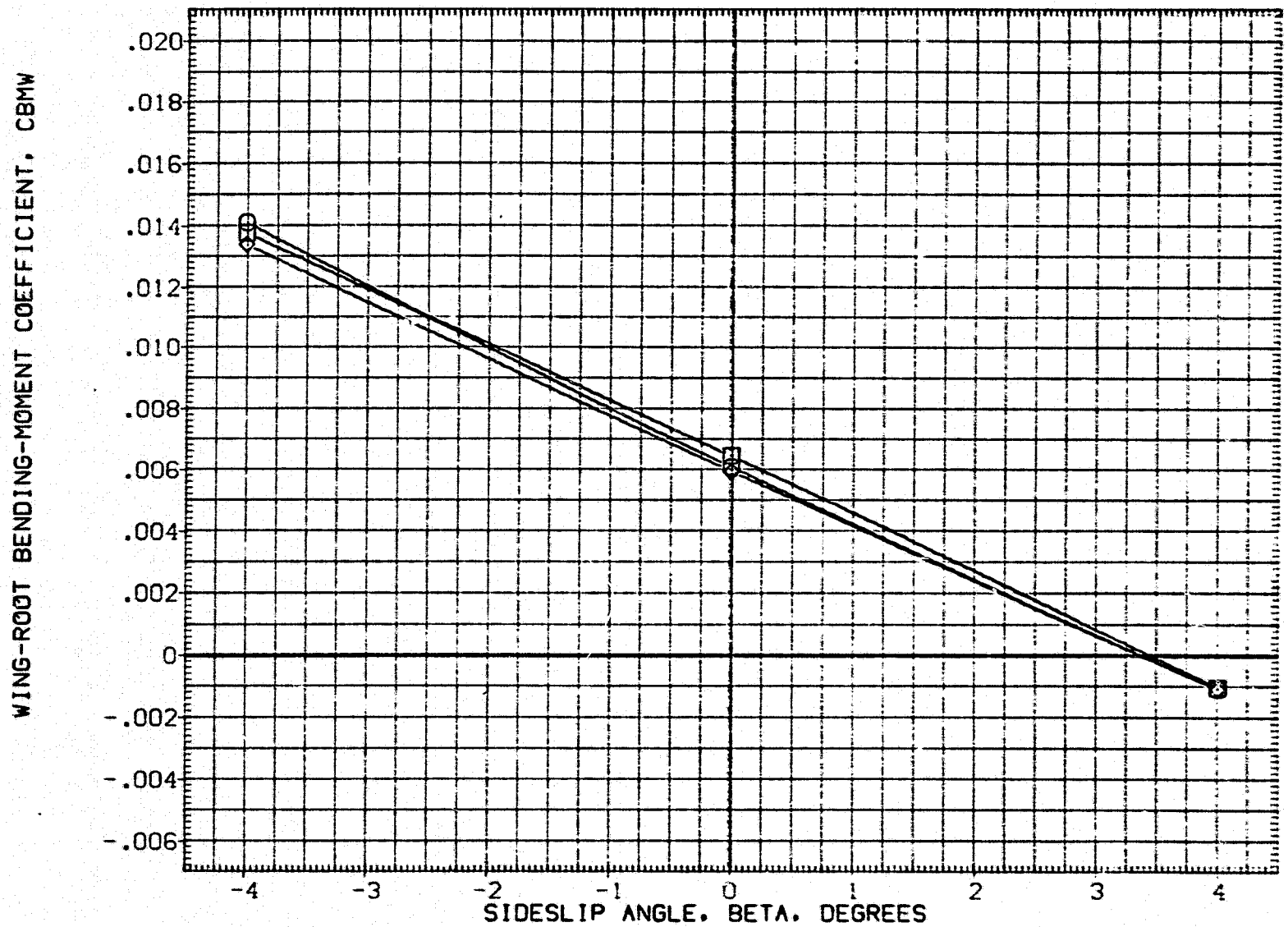



FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y46) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4Y38) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

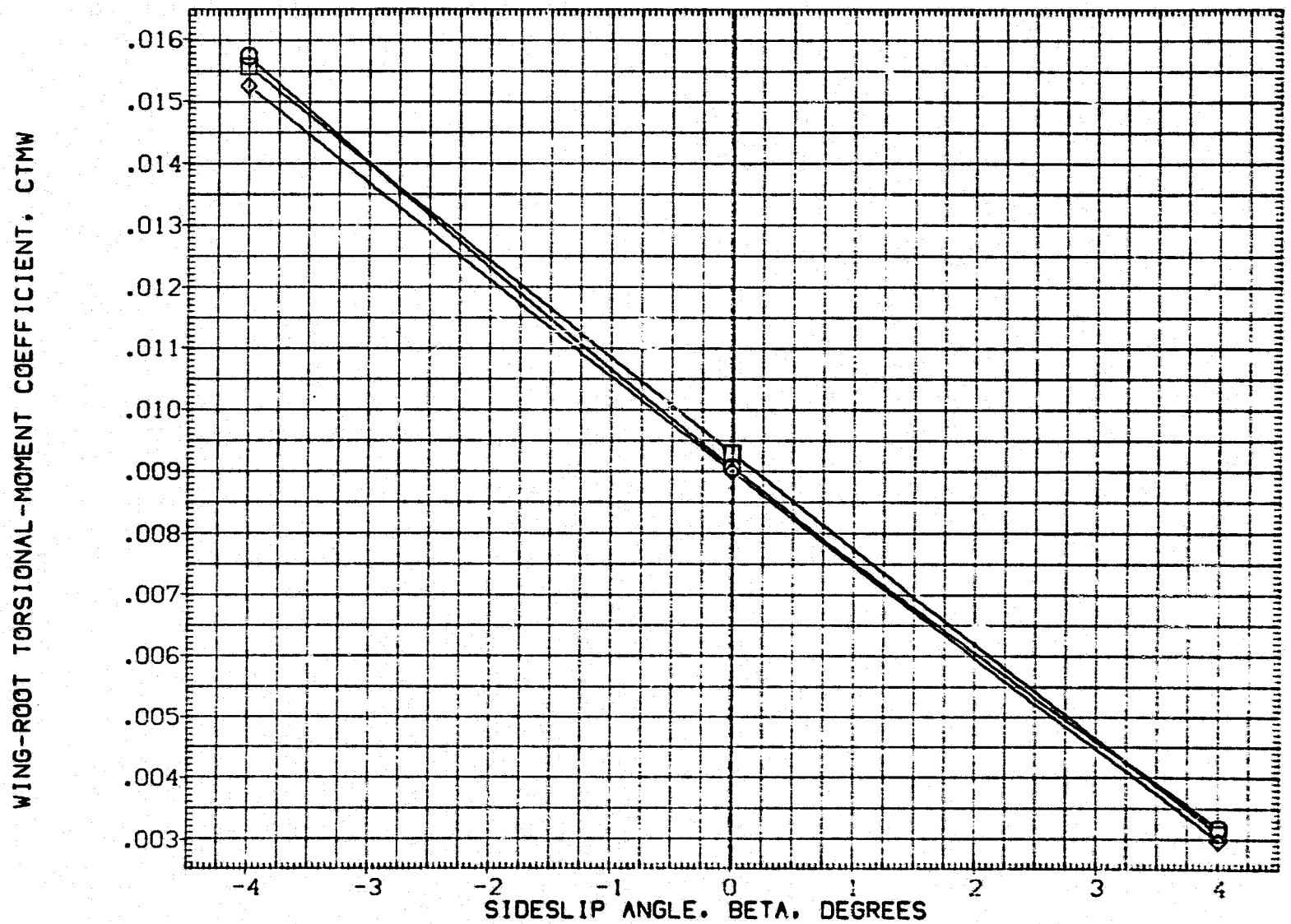



FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y46) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4Y38) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

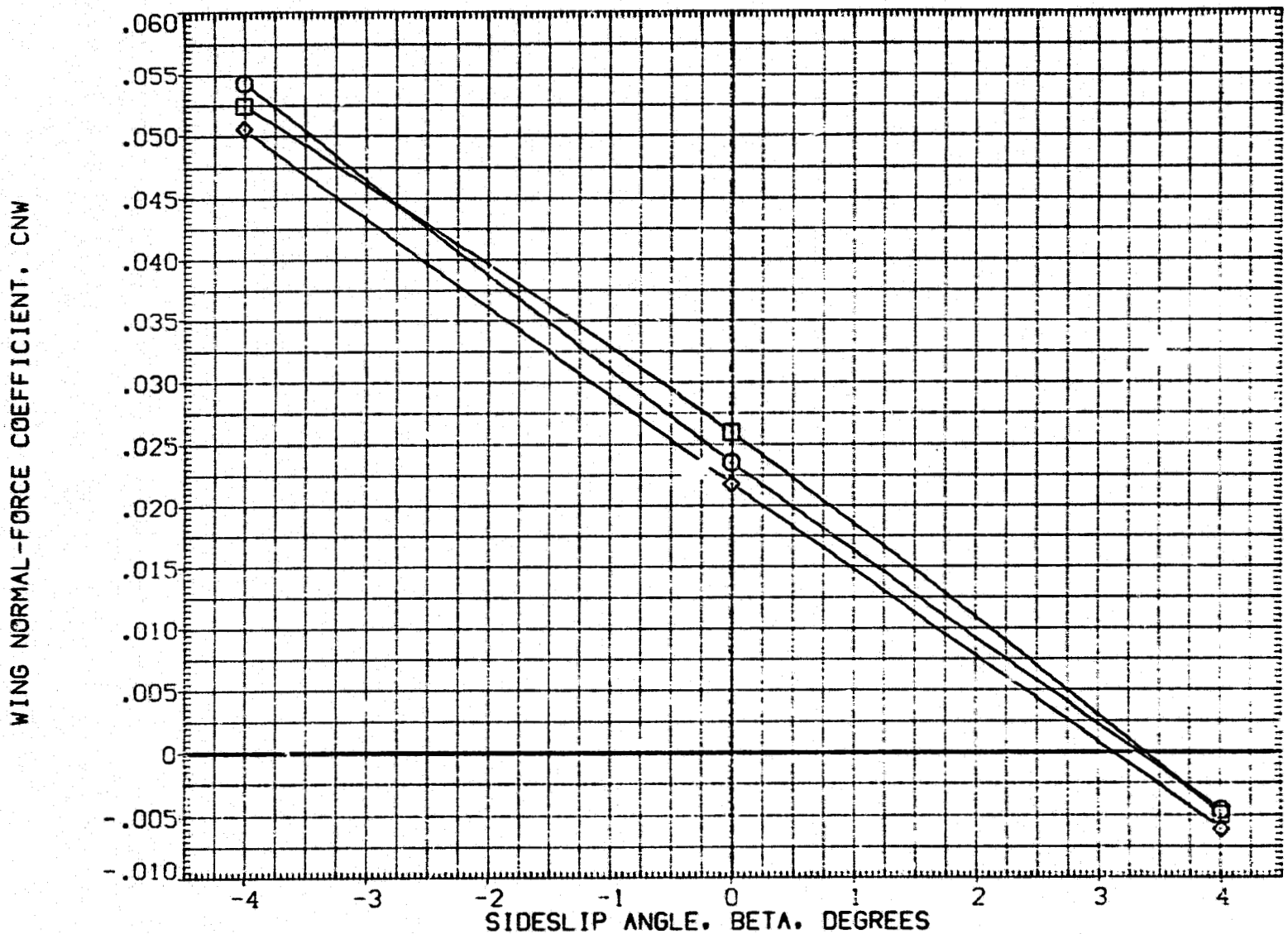



FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y46) | □ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4Y38) | ◇ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0700 | |

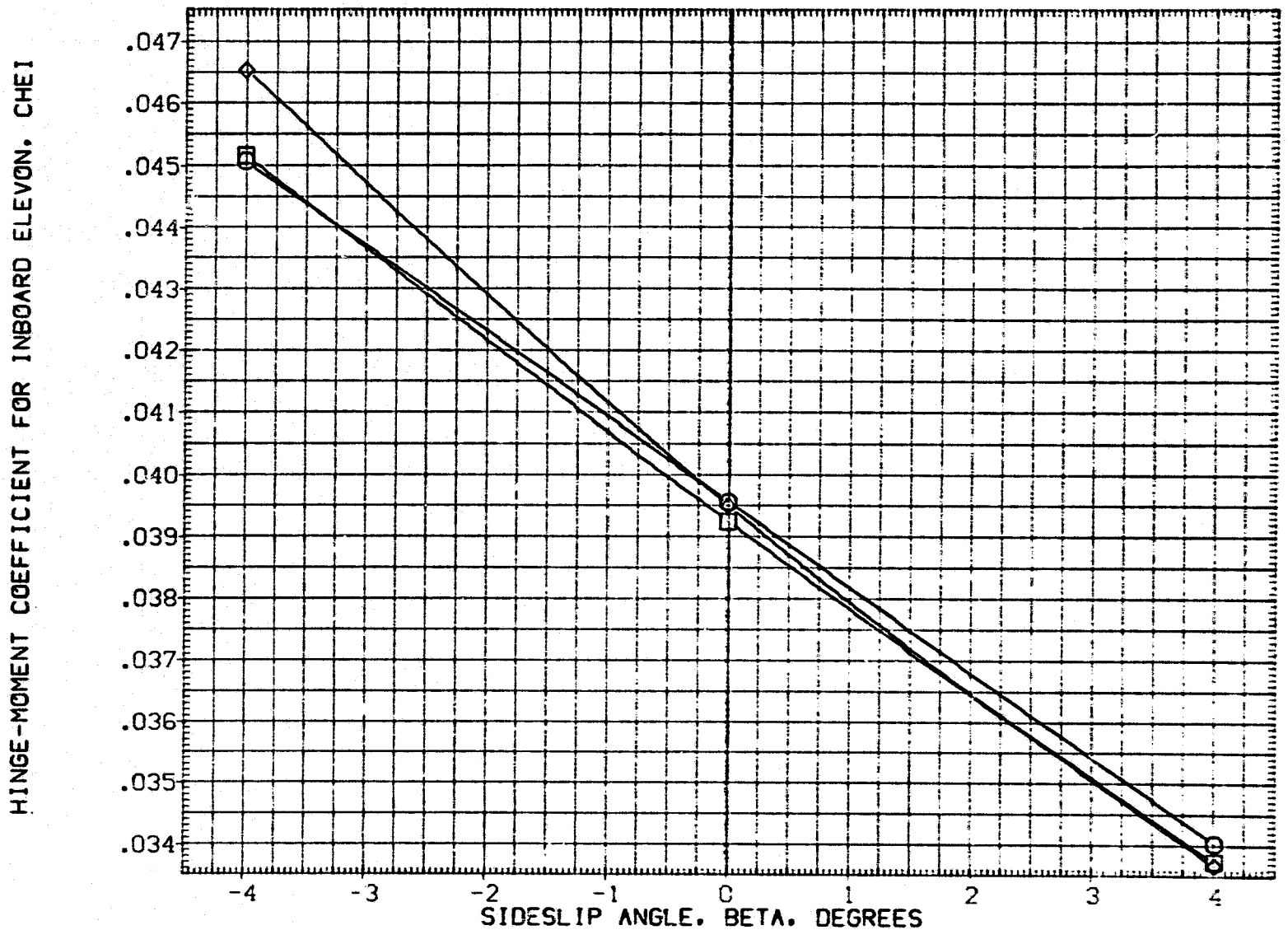



FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y46) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4Y38) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | 1.000 | |

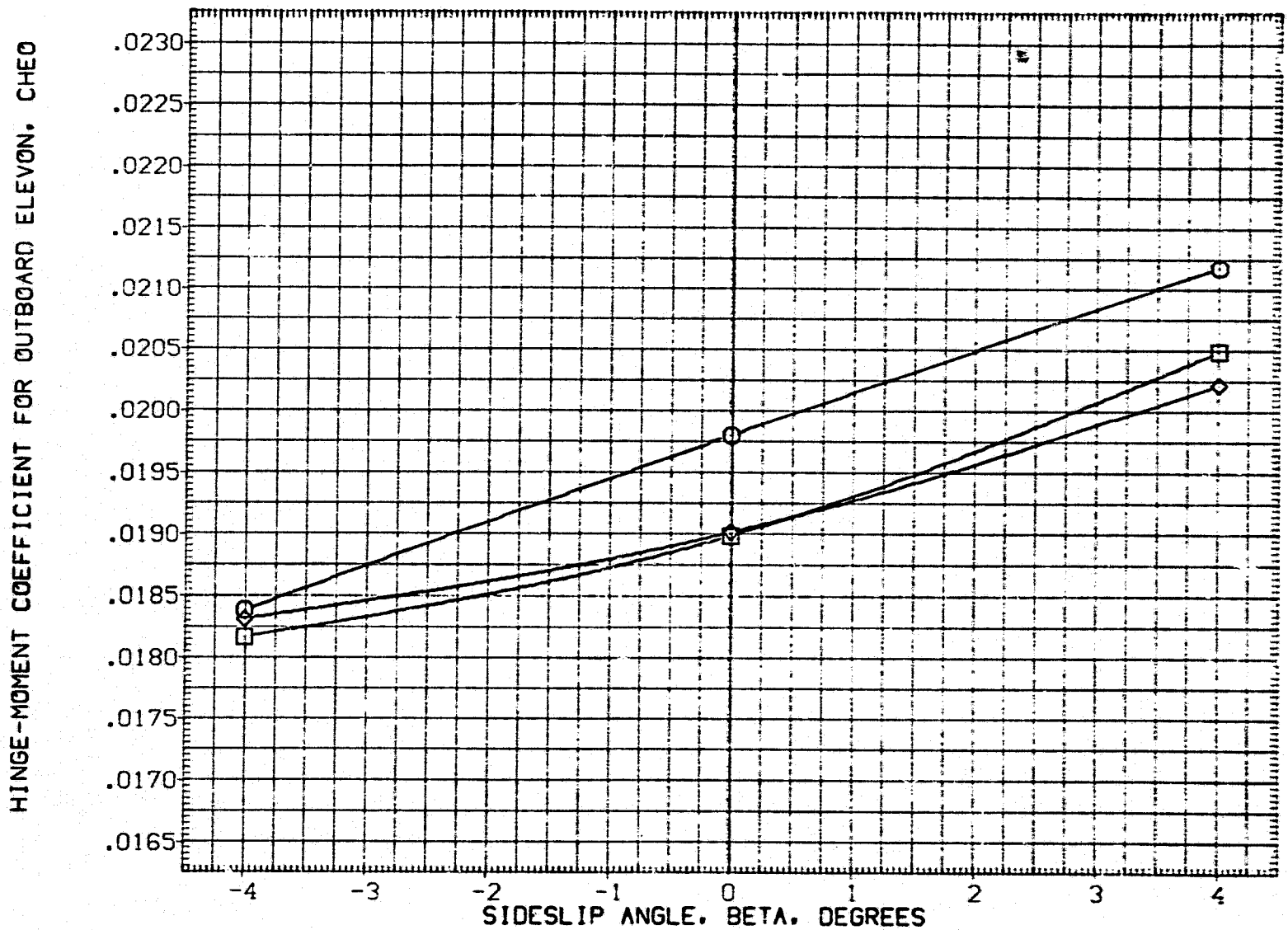



FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y20) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y46) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4Y38) ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

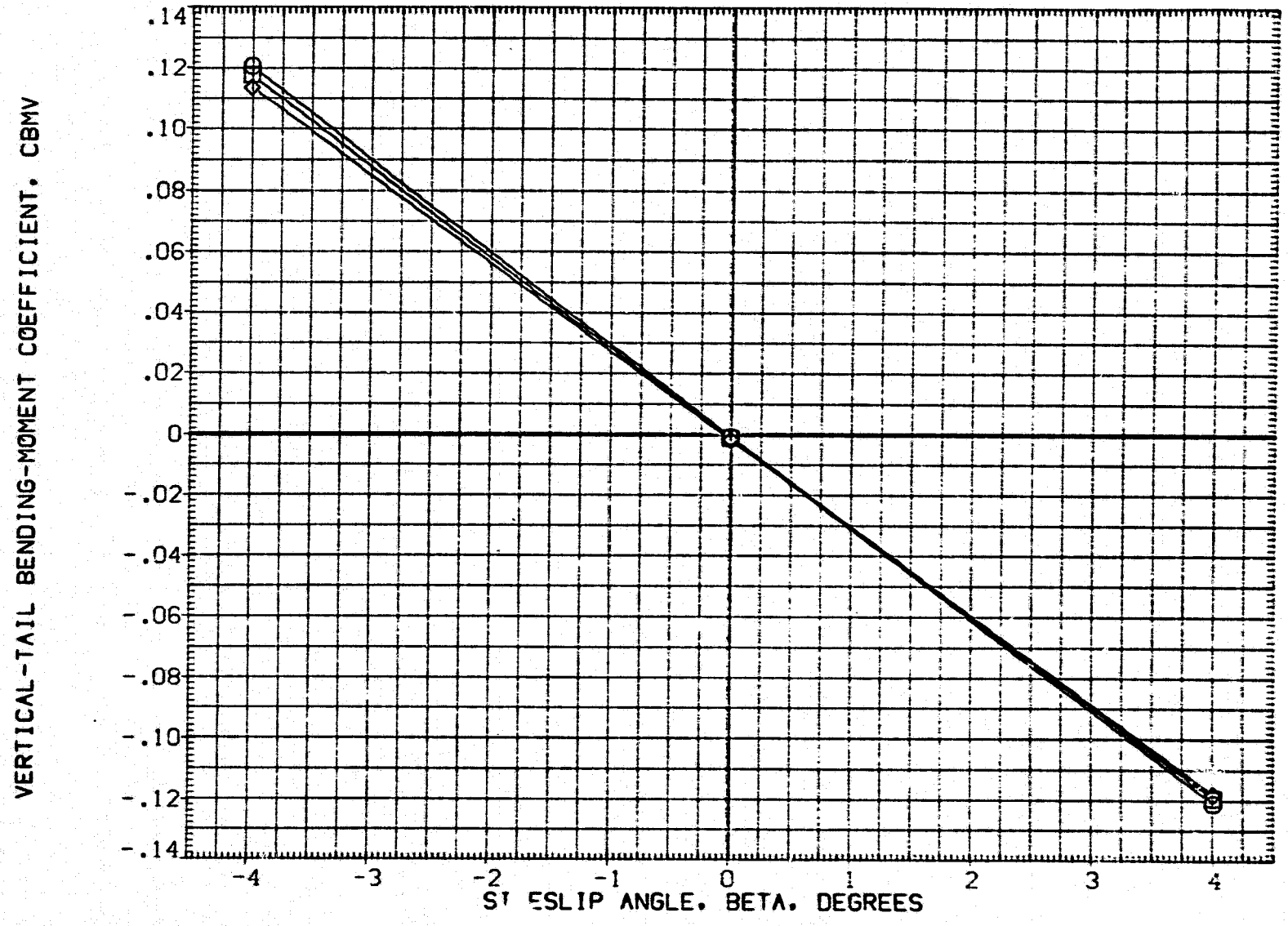



FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y20) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y46) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4Y38) ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .2000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

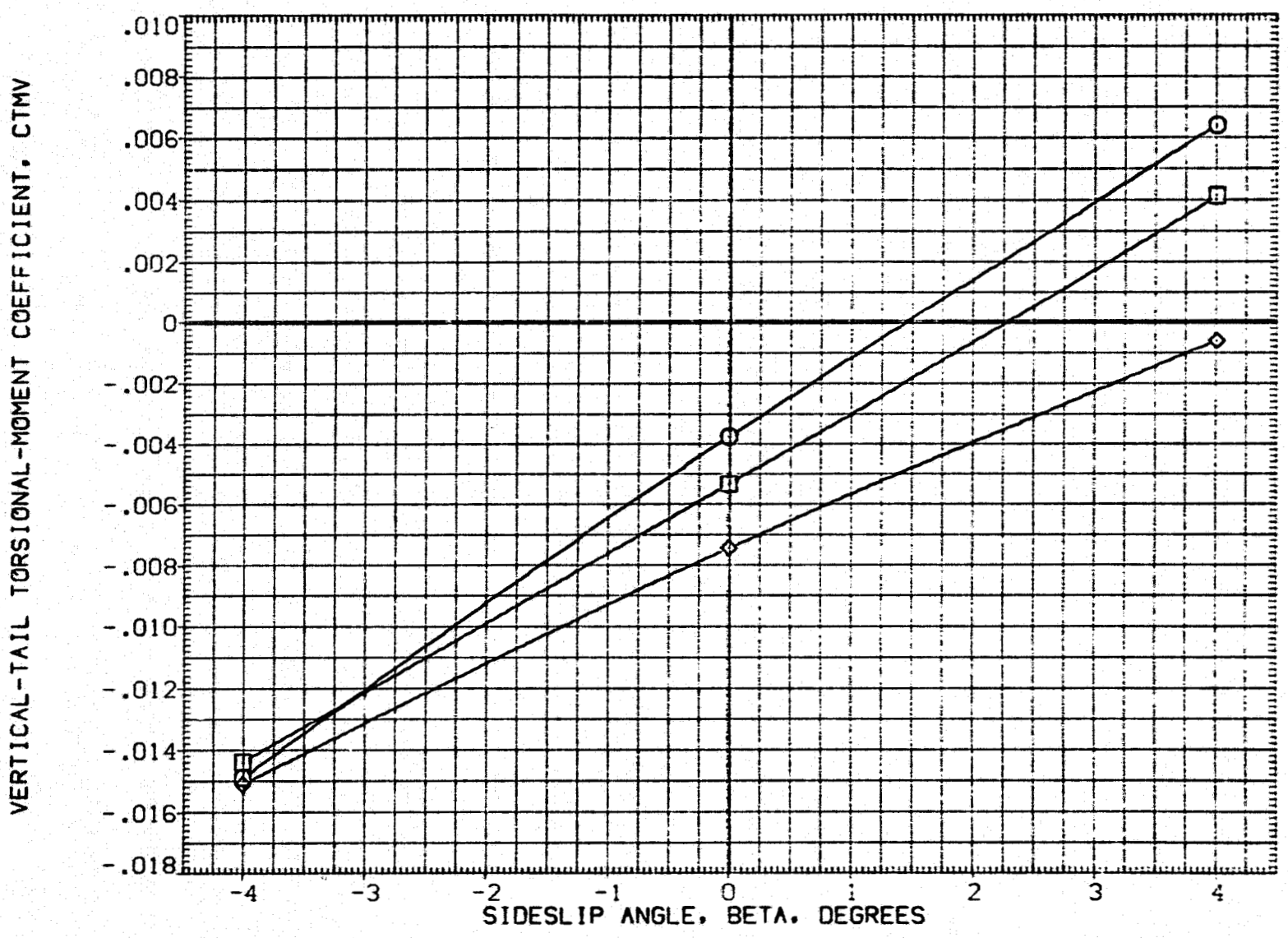



FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|
| (RE4Y20) ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y46) □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4Y38) ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

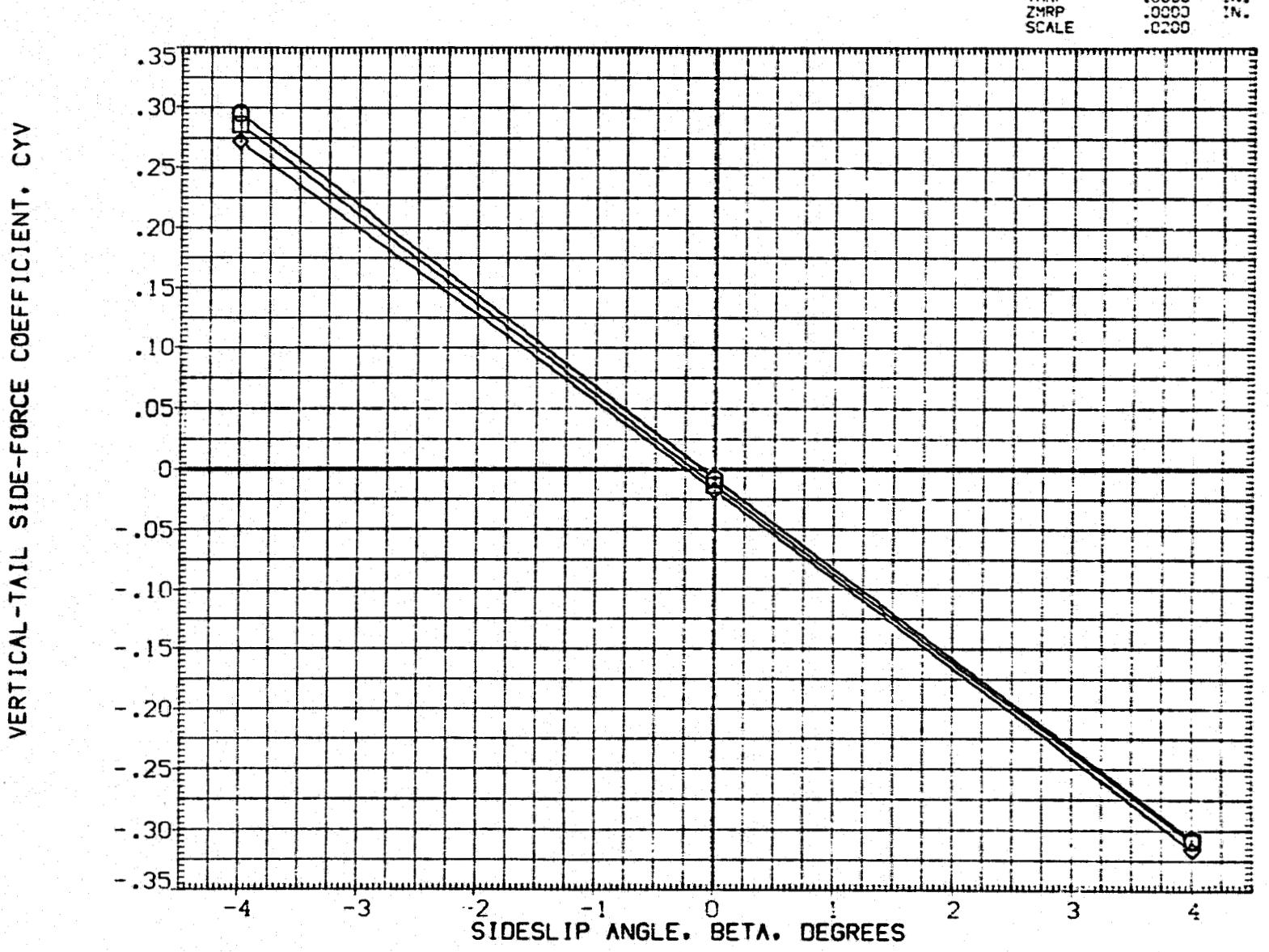



FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y46) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4Y38) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

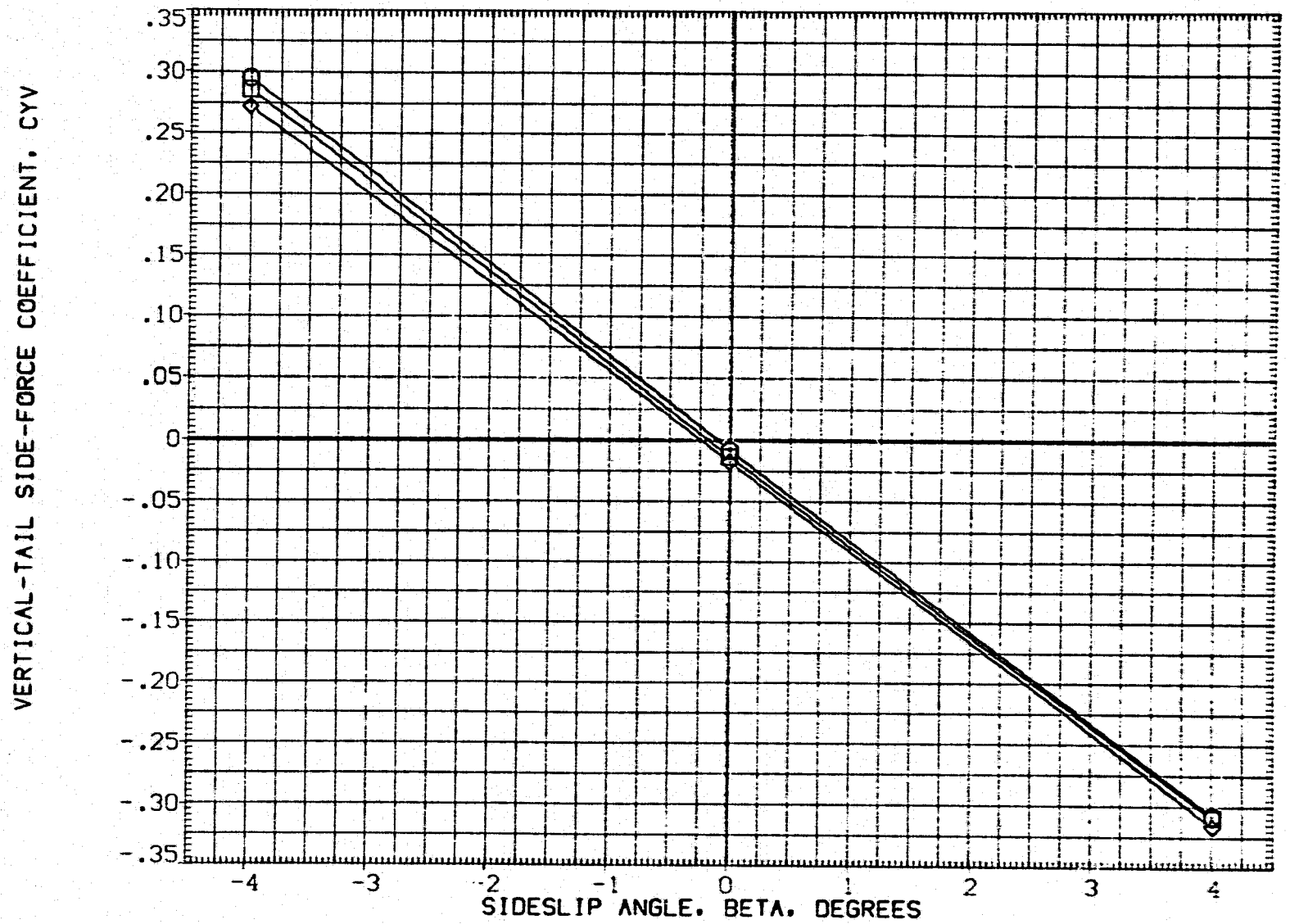



FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 3.400 |
| (RE4Y46) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 2.500 |
| (RE4Y38) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .600 | 1.750 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

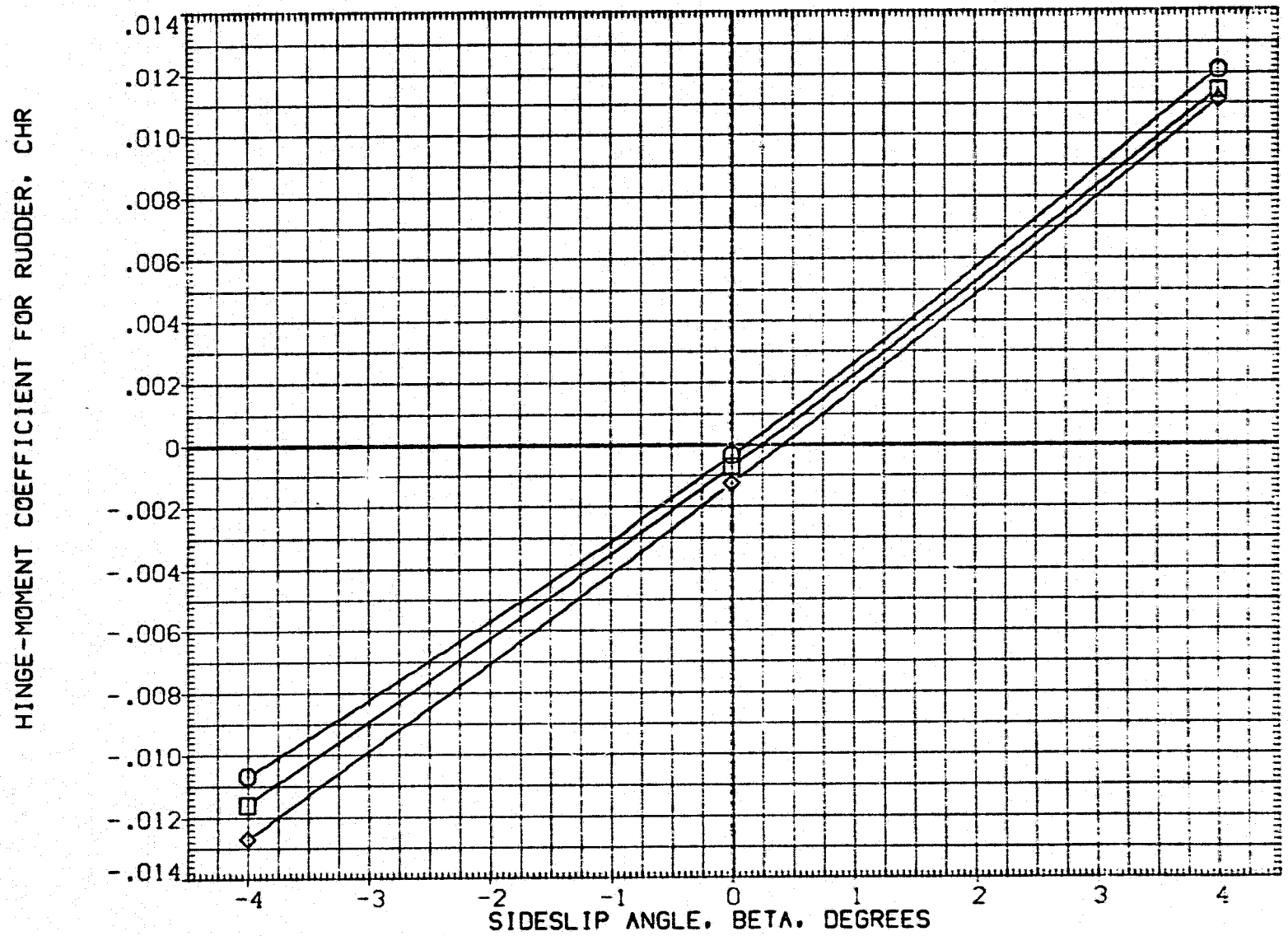



FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y47) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4Y39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

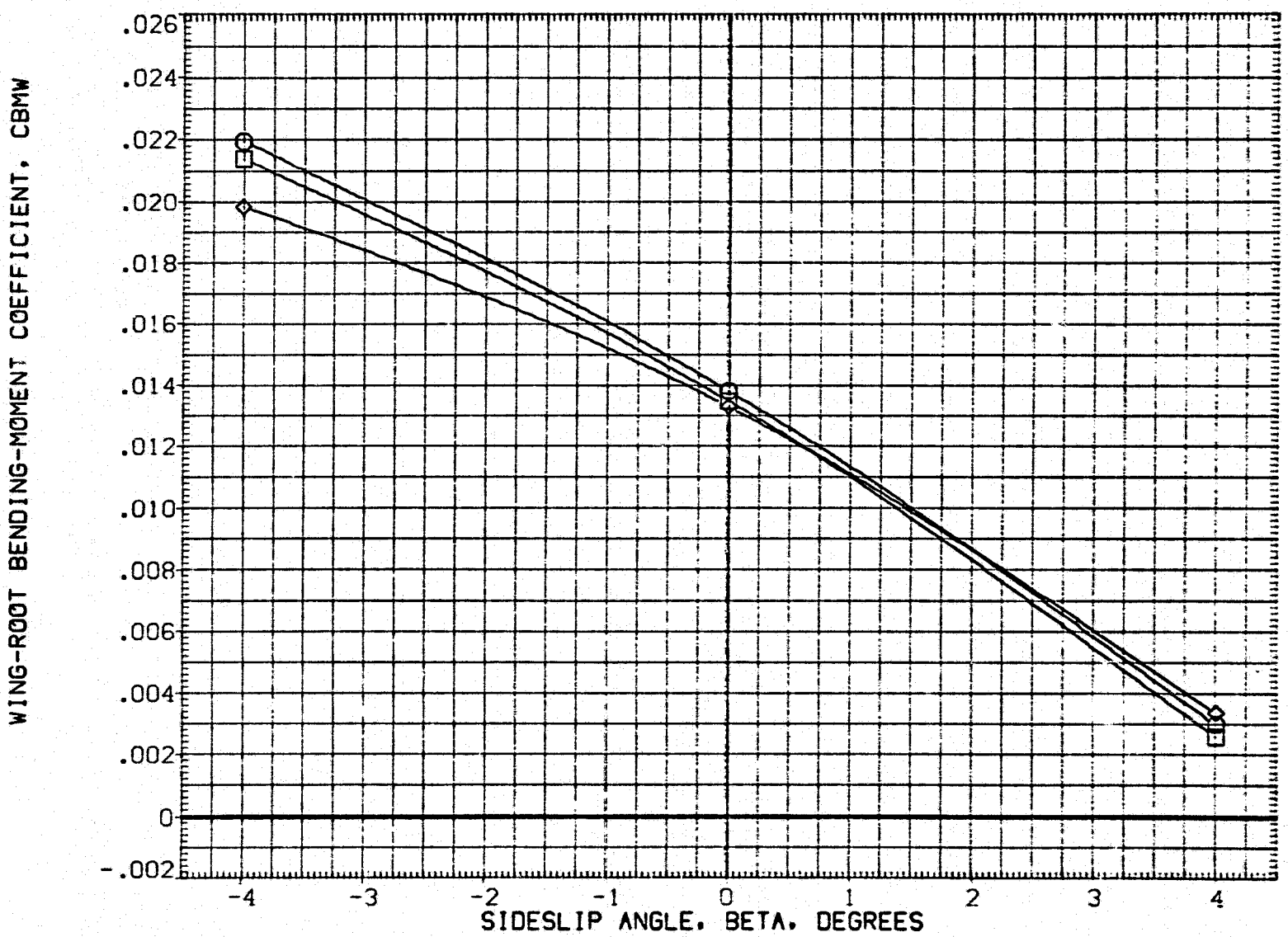



FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y47) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4Y39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

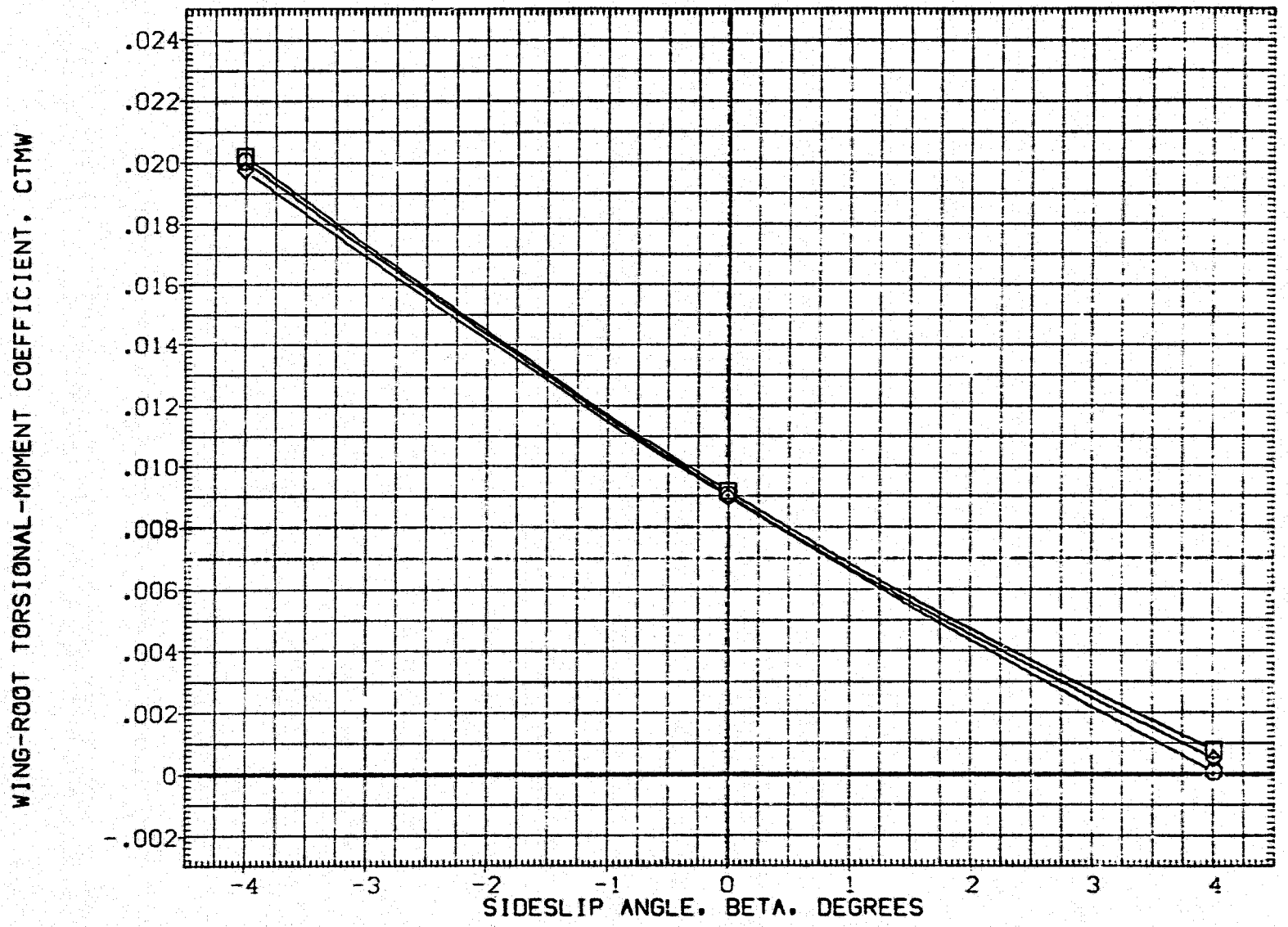



FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 1A80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y47) | □ | ARC 11-023 1A80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4Y39) | ◇ | ARC 11-023 1A80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

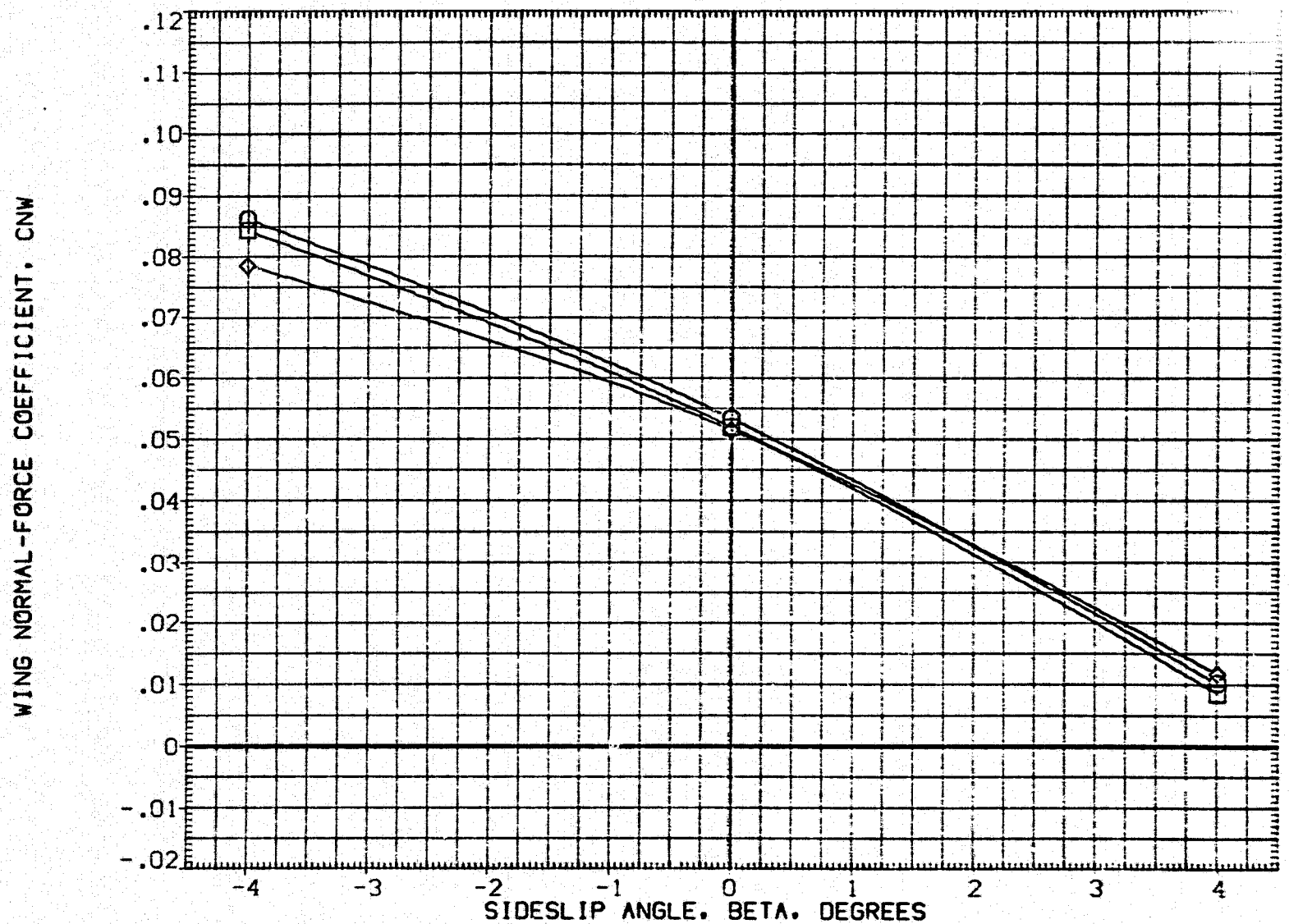



FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y47) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4Y39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

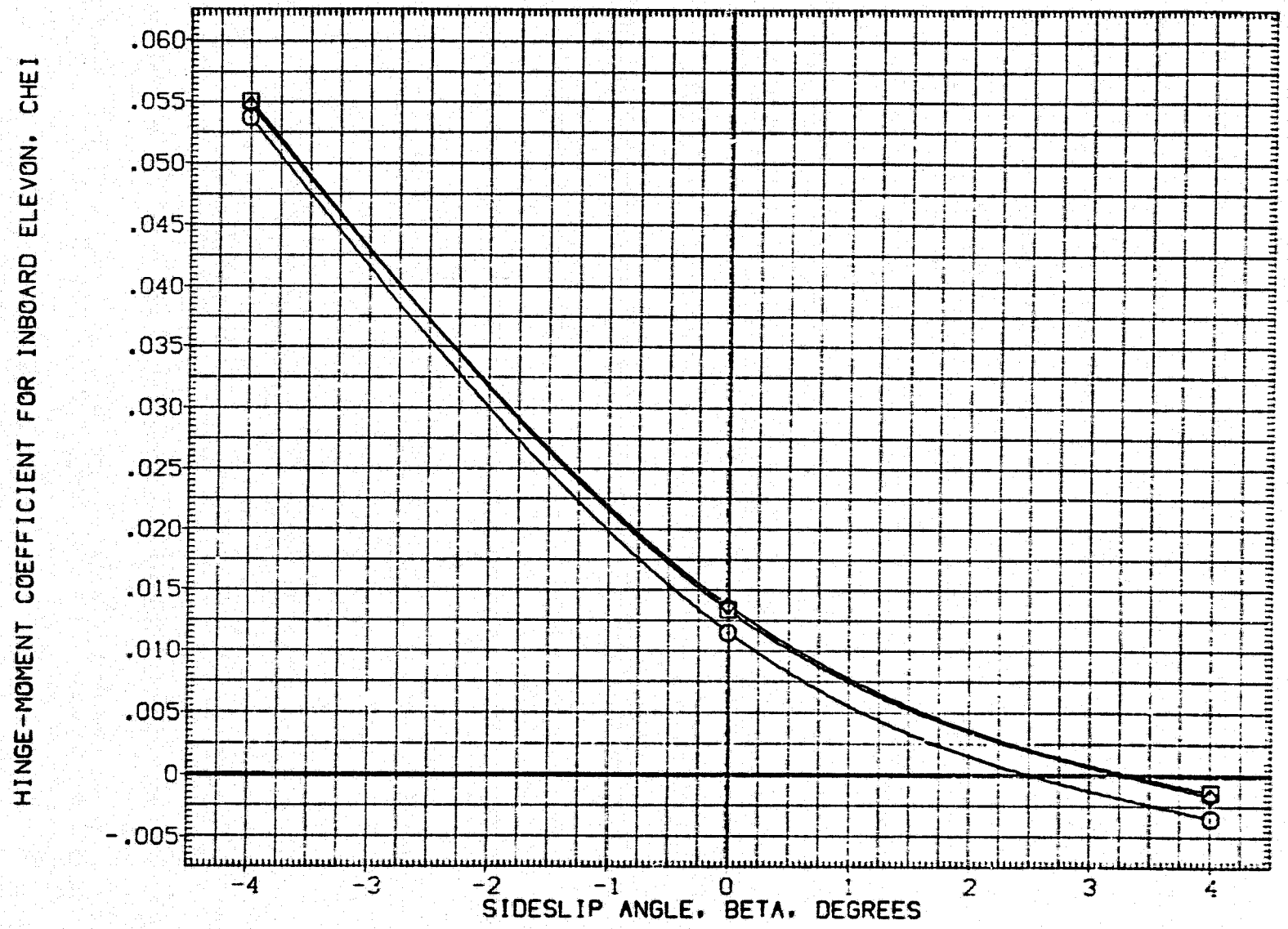



FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y47) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4Y39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

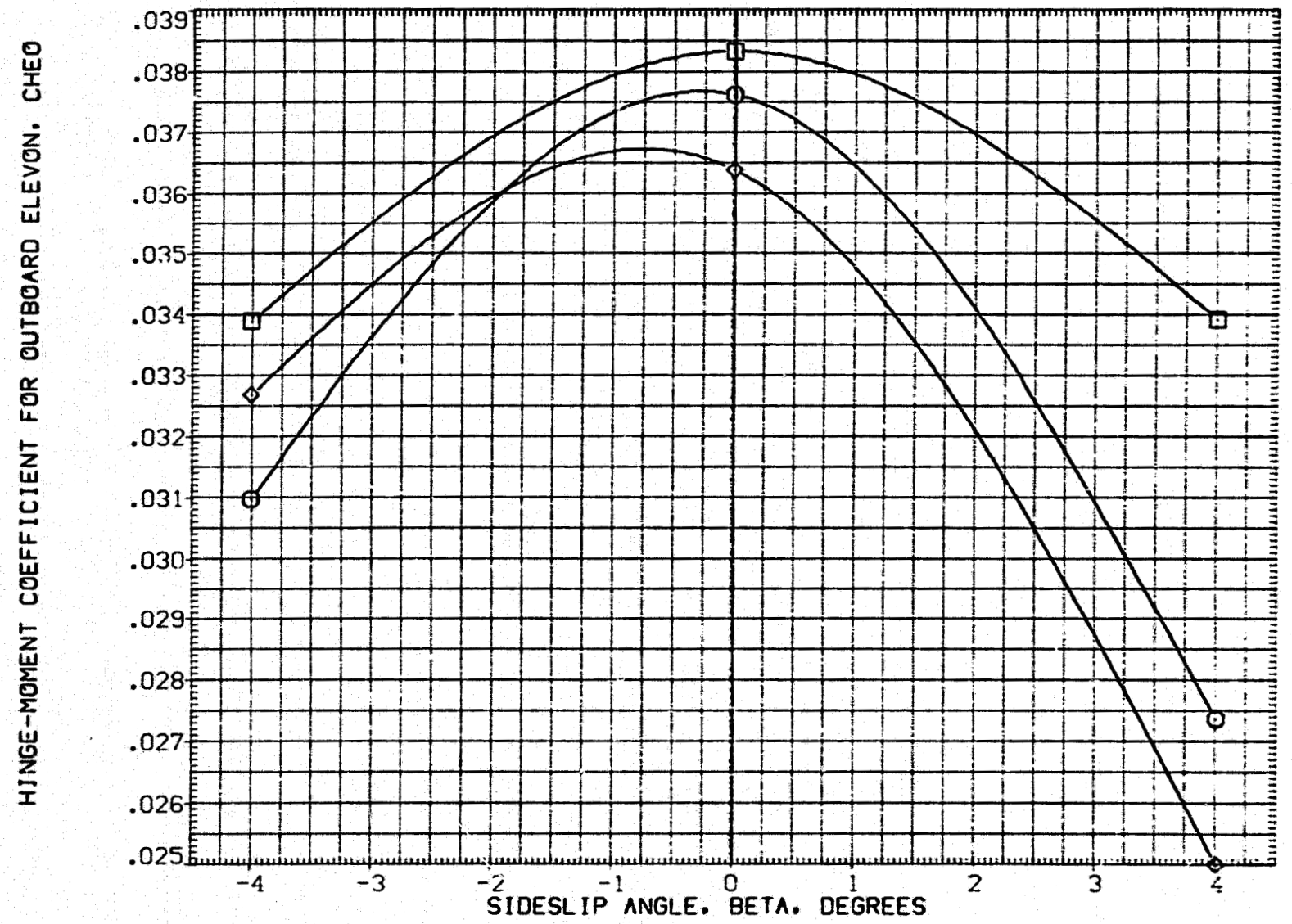



FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y47) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4Y39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

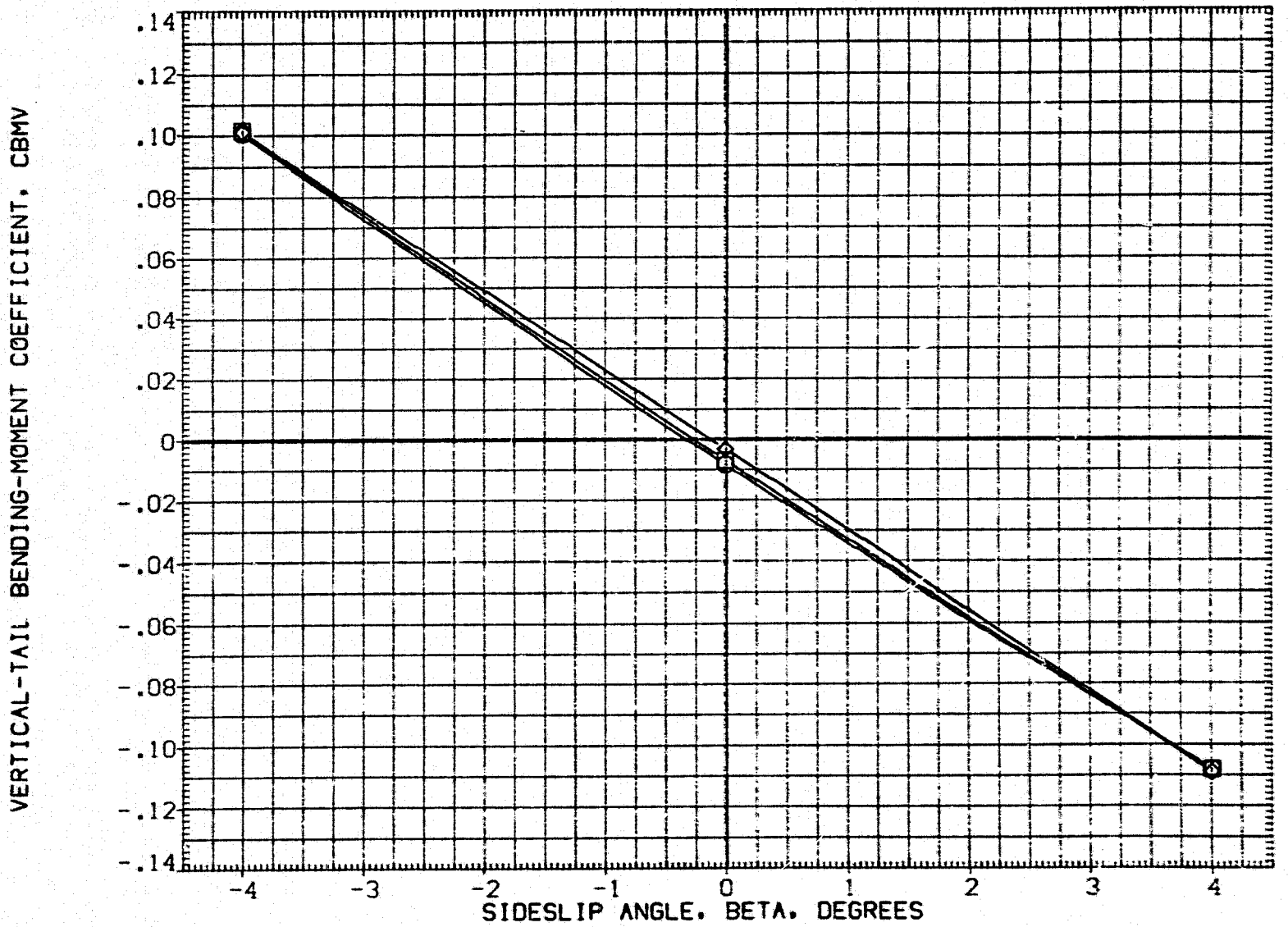



FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y47) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4Y39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

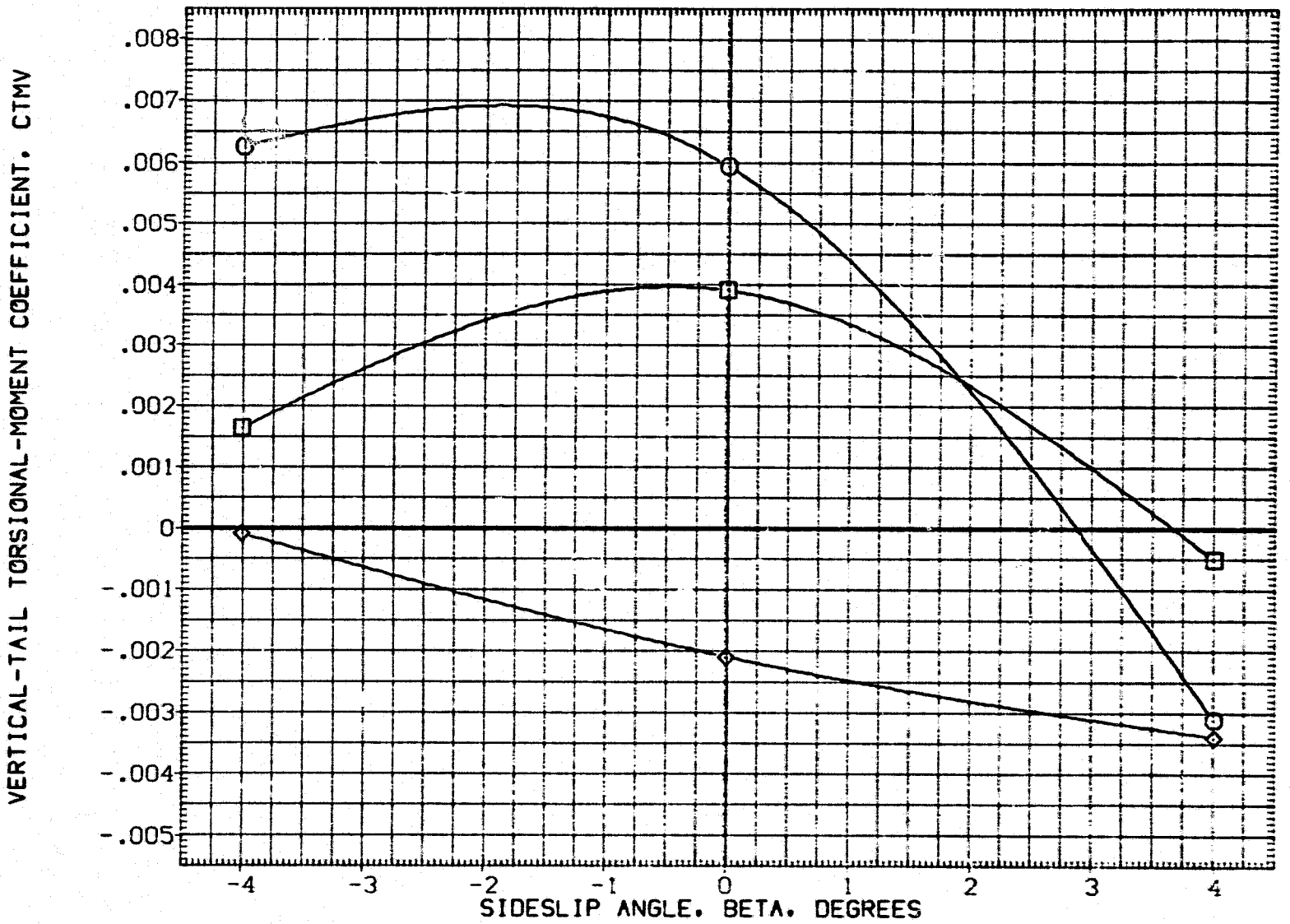



FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y47) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4Y39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

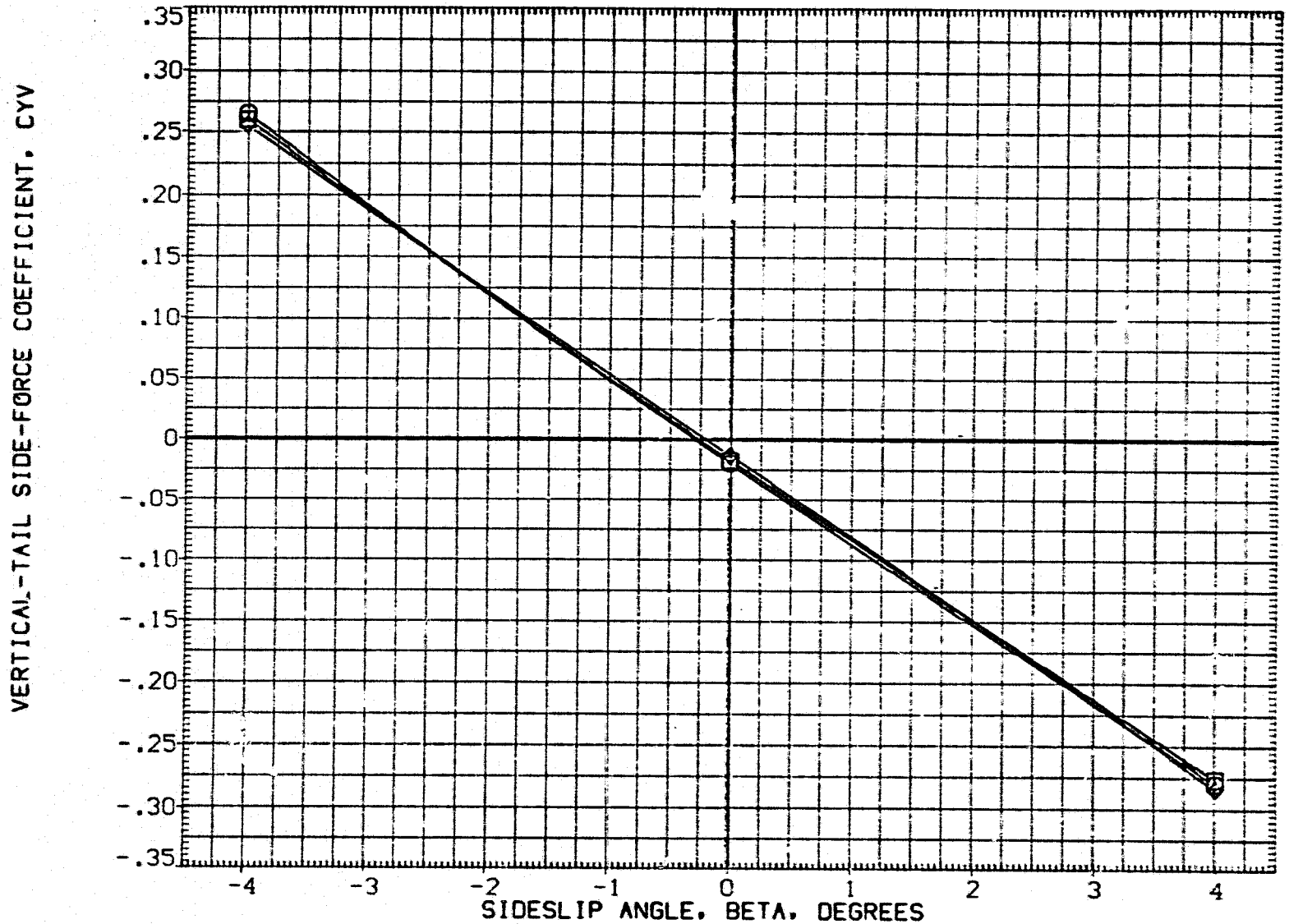



FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y21) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 4.250 |
| (RE4Y47) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 3.250 |
| (RE4Y39) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .900 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

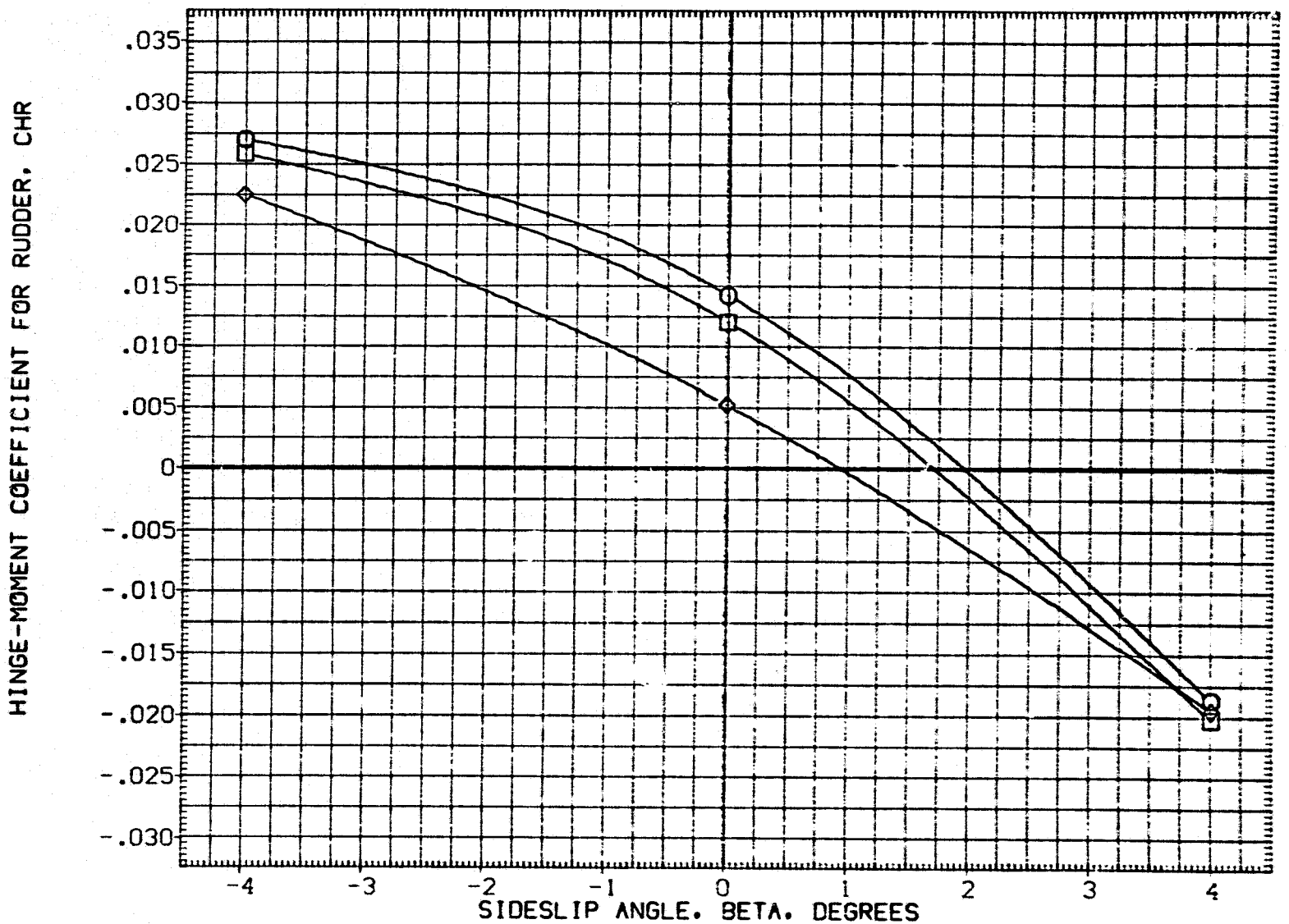



FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A)ALPHA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y48) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

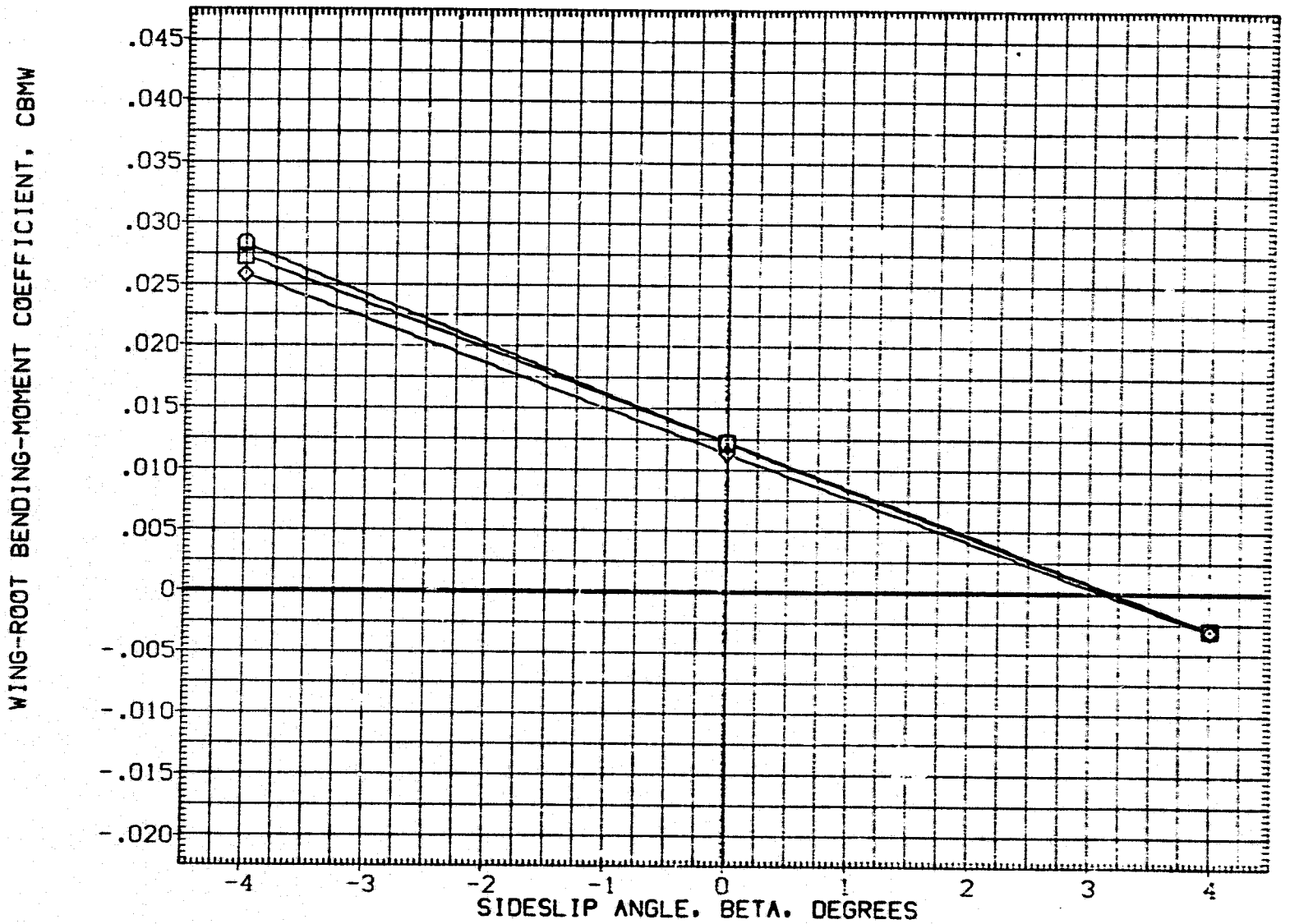



FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y48) | □ | ARC 11-023 IA60 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

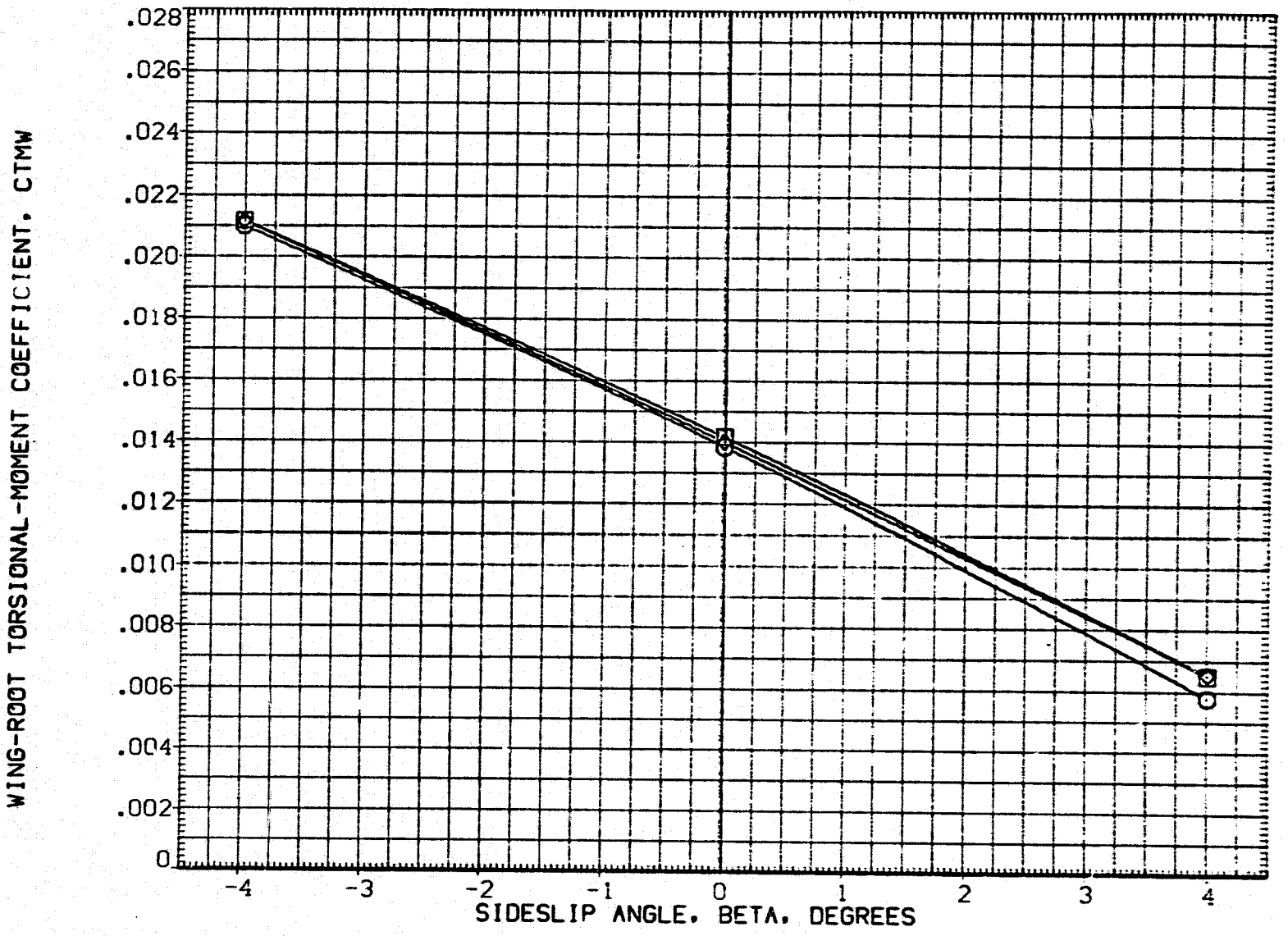



FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y48) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

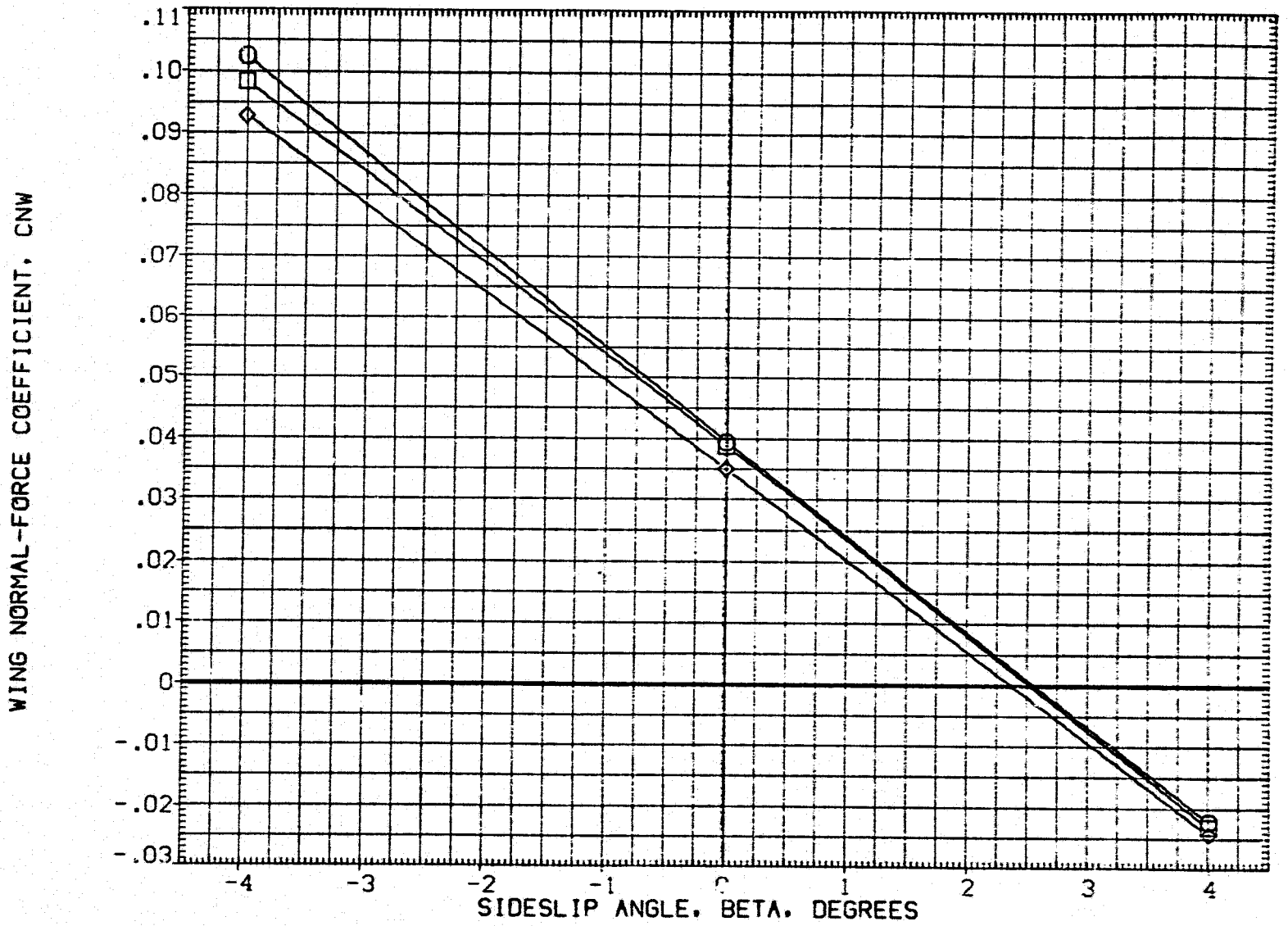



FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y48) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

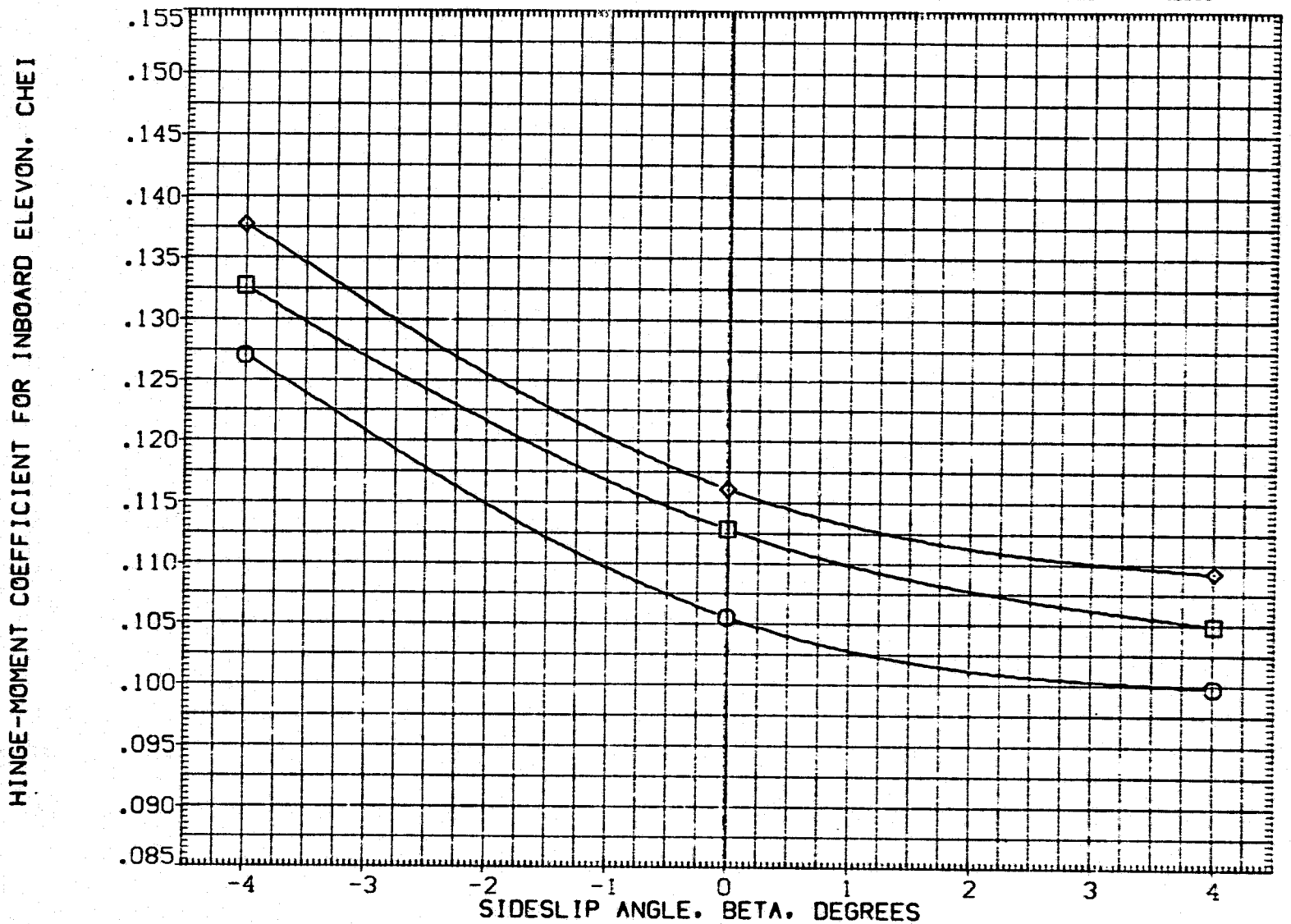



FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y48) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

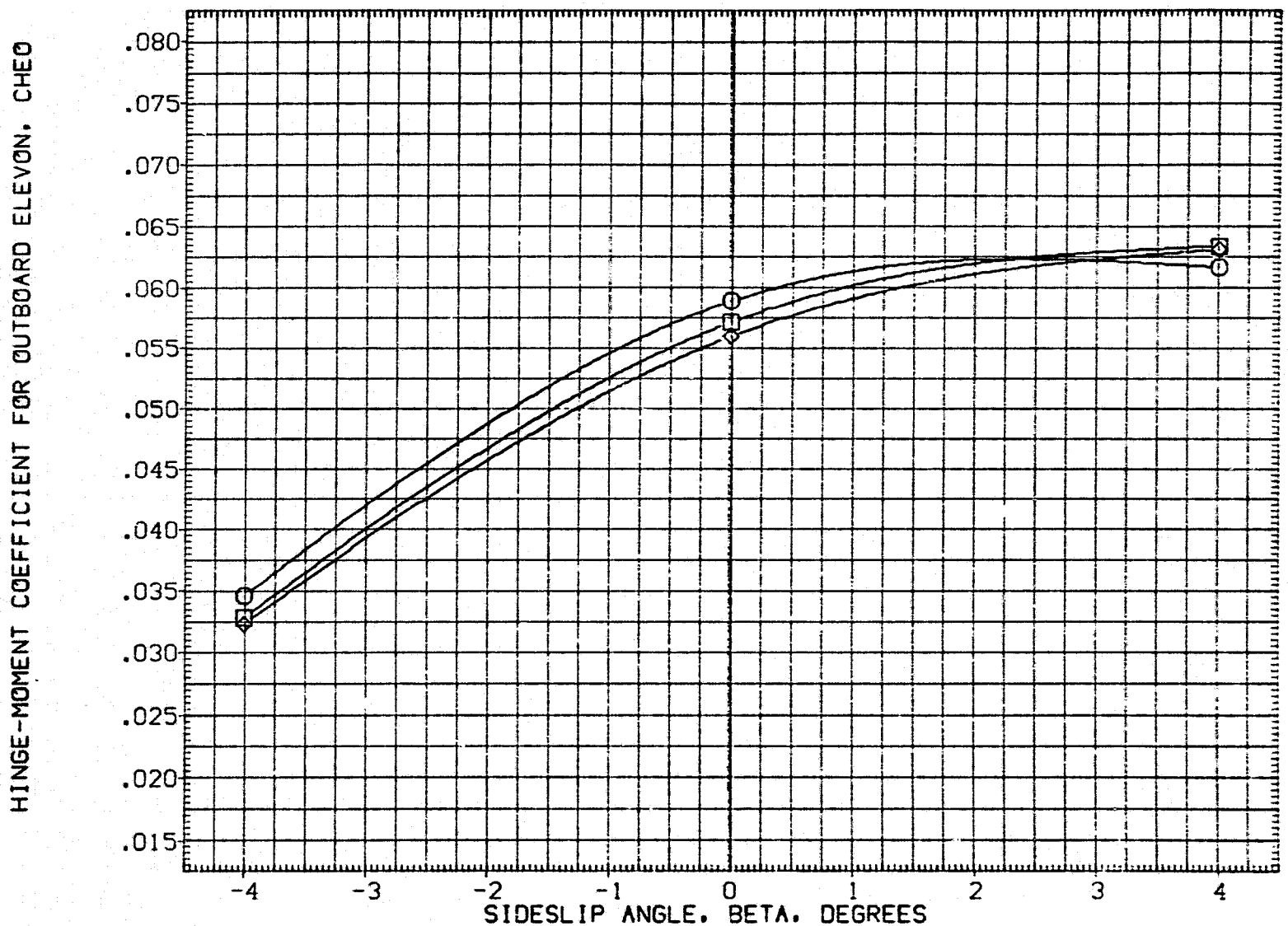



FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y48) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 269[illegible].0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

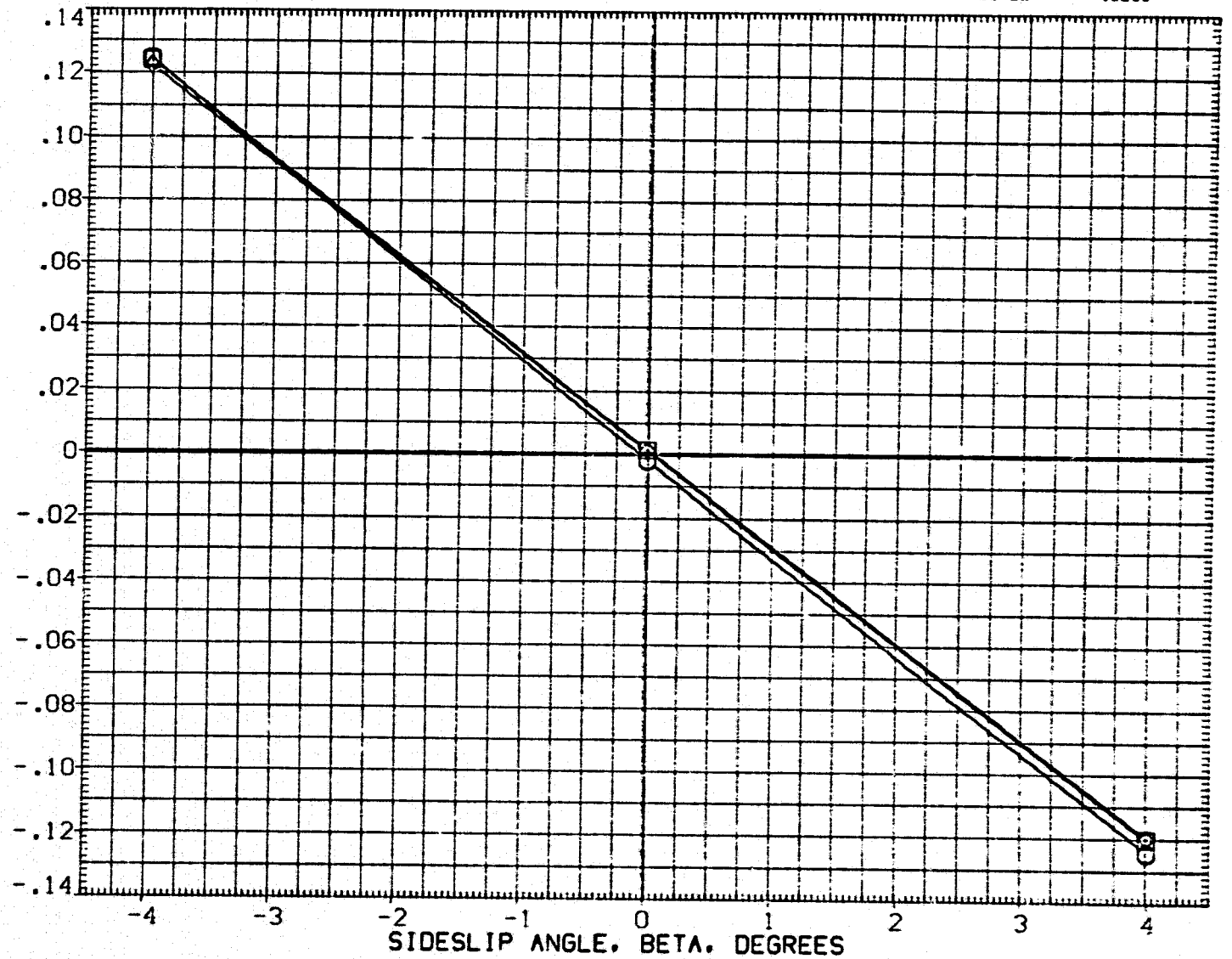



FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y48) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

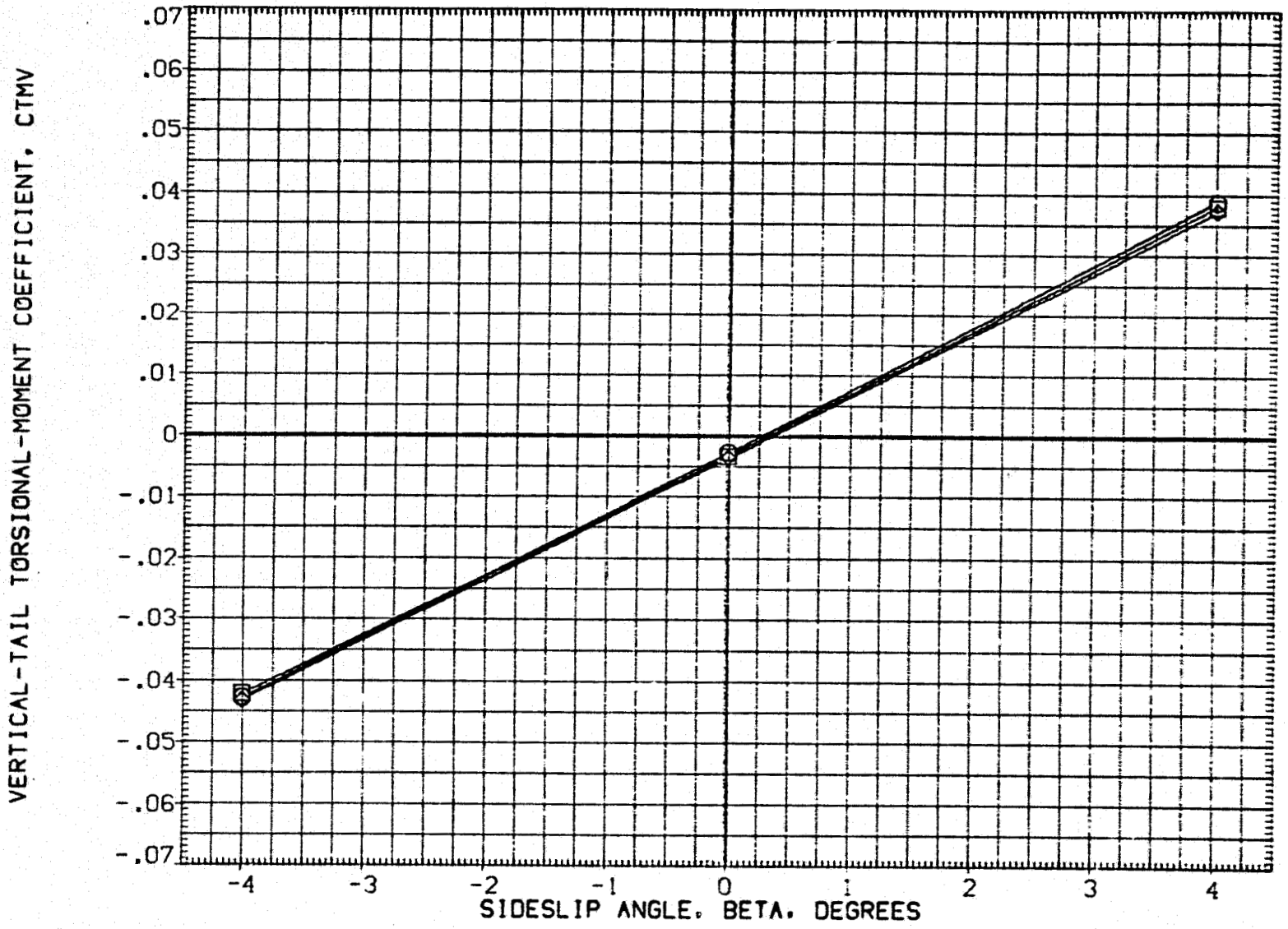



FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y48) | ▭ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

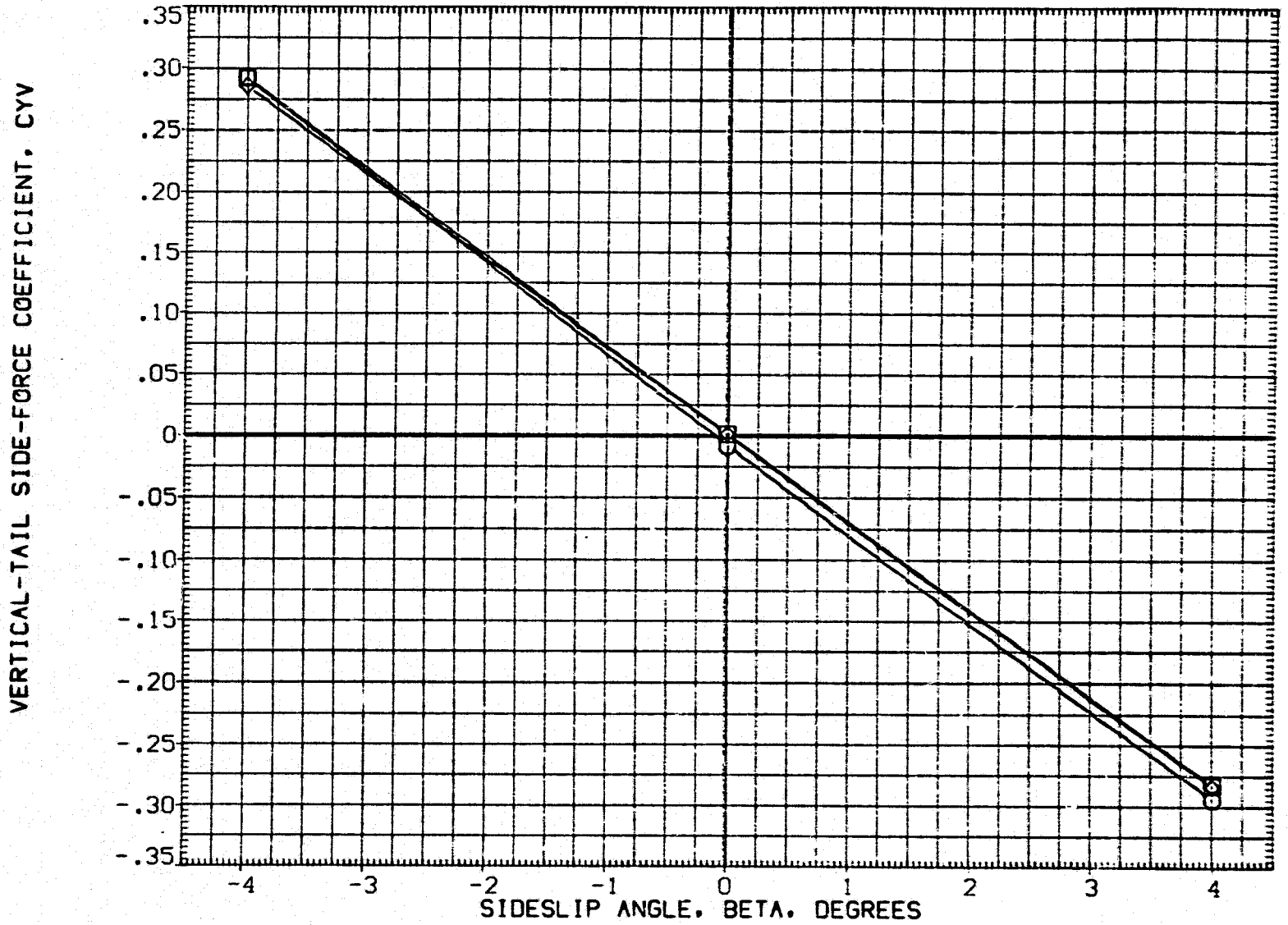



FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | Rn/L |
|---|---|---|---|---|---|---|
| (RE4Y22) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 4.250 |
| (RE4Y48) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 3.250 |
| (RE4Y40) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 1.100 | 2.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

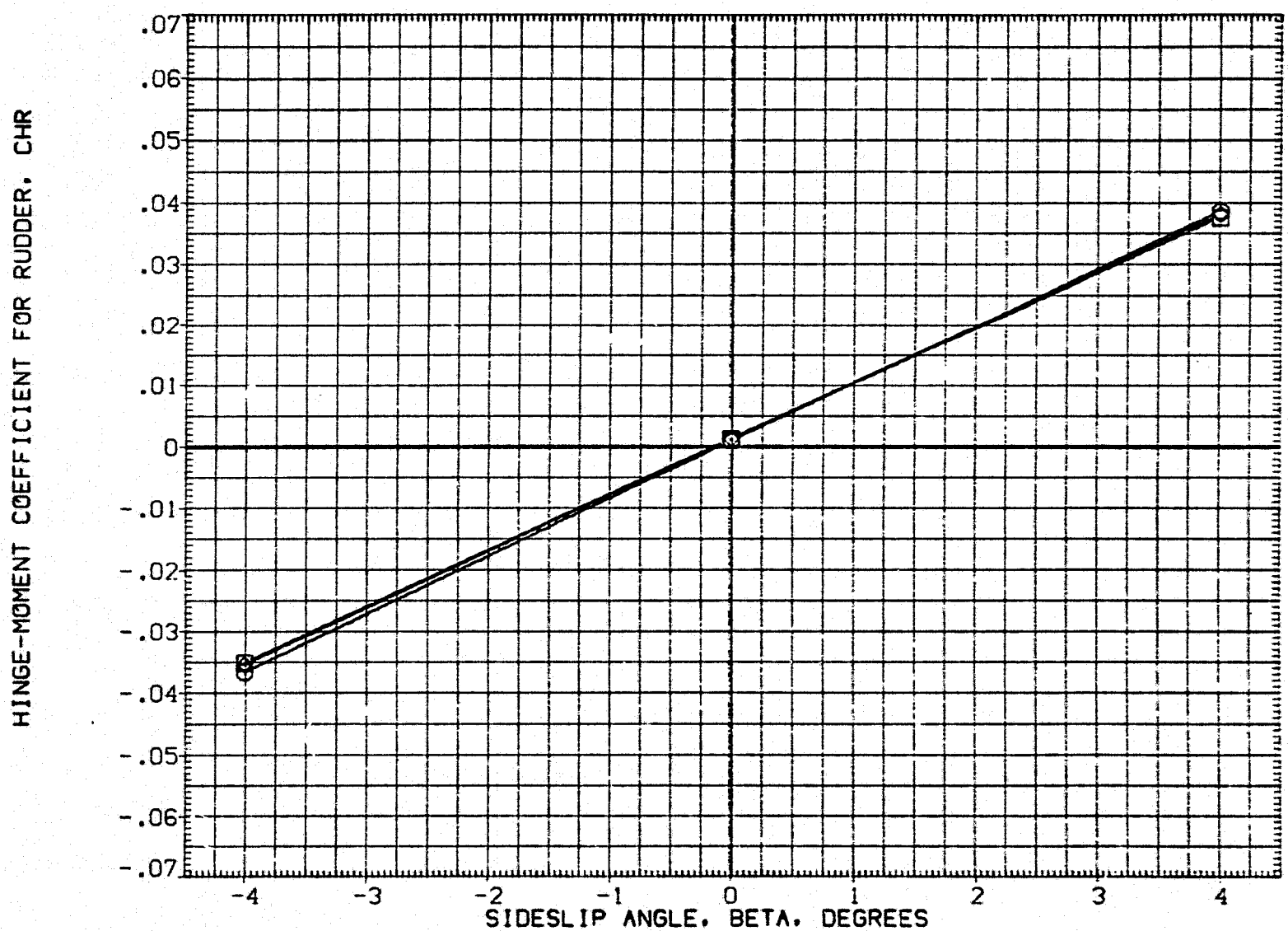



FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON

(A)ALPHA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (RE4N20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N25) | □ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N06) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N01) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

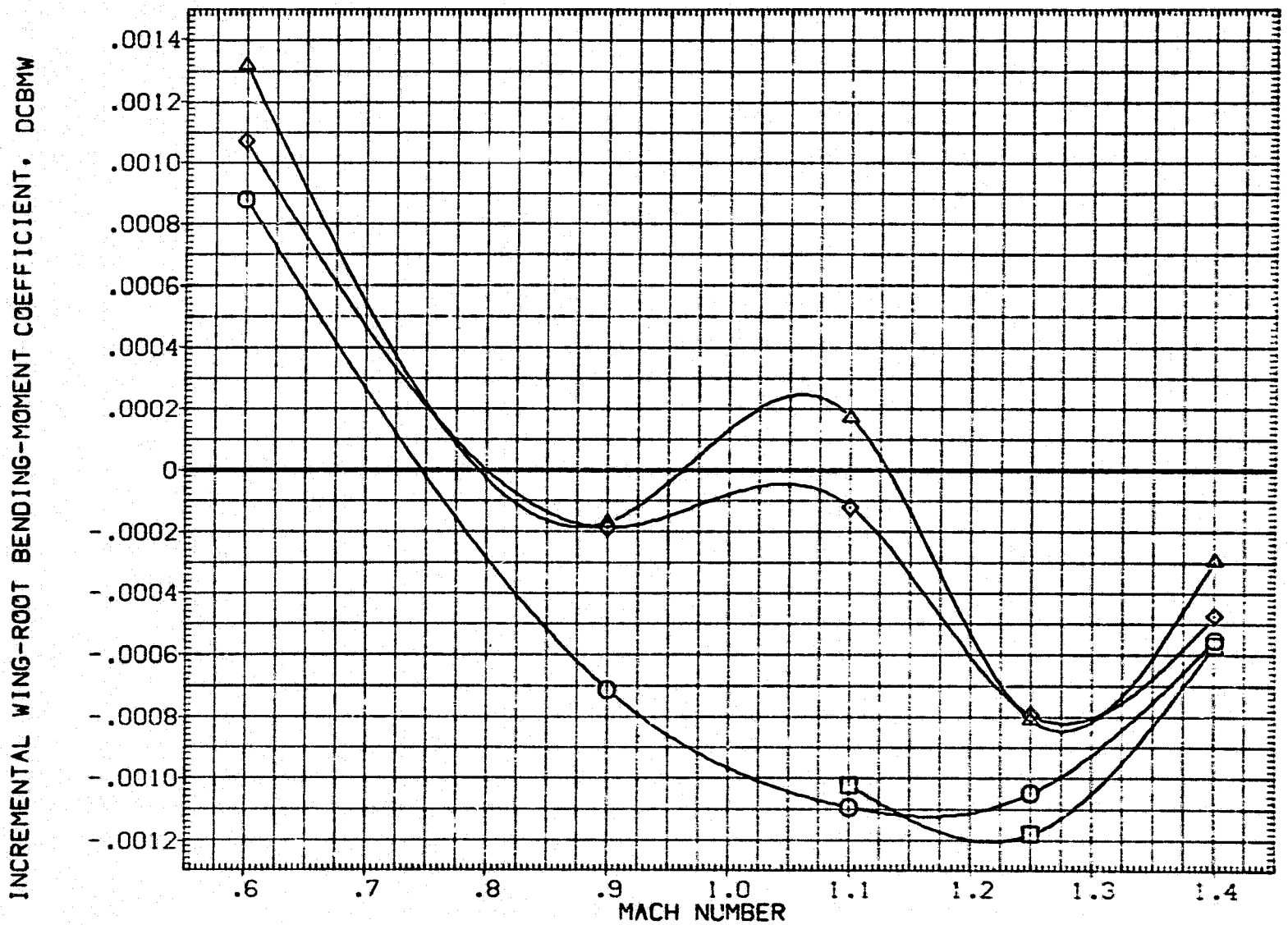



FIG. 110 SUMMARY, SRB PLUME SIZE EFFECTS ON WING LOADS

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (RE4N20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N25) | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N06) | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N01) | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

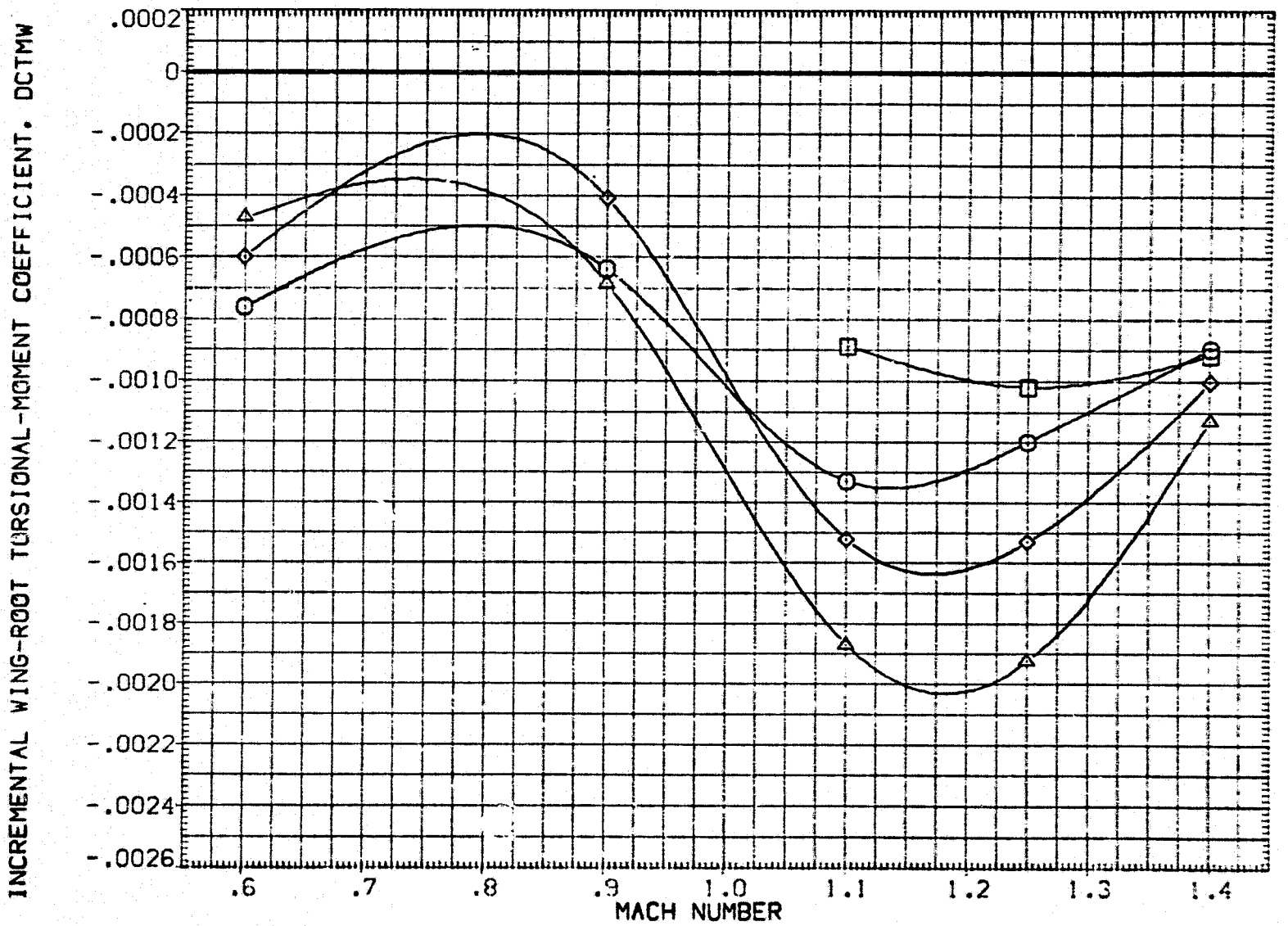



FIG. 110 SUMMARY, SRB PLUME SIZE EFFECTS ON WING LOADS

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (RE4N20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N25) | ◇ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N06) | △ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N01) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

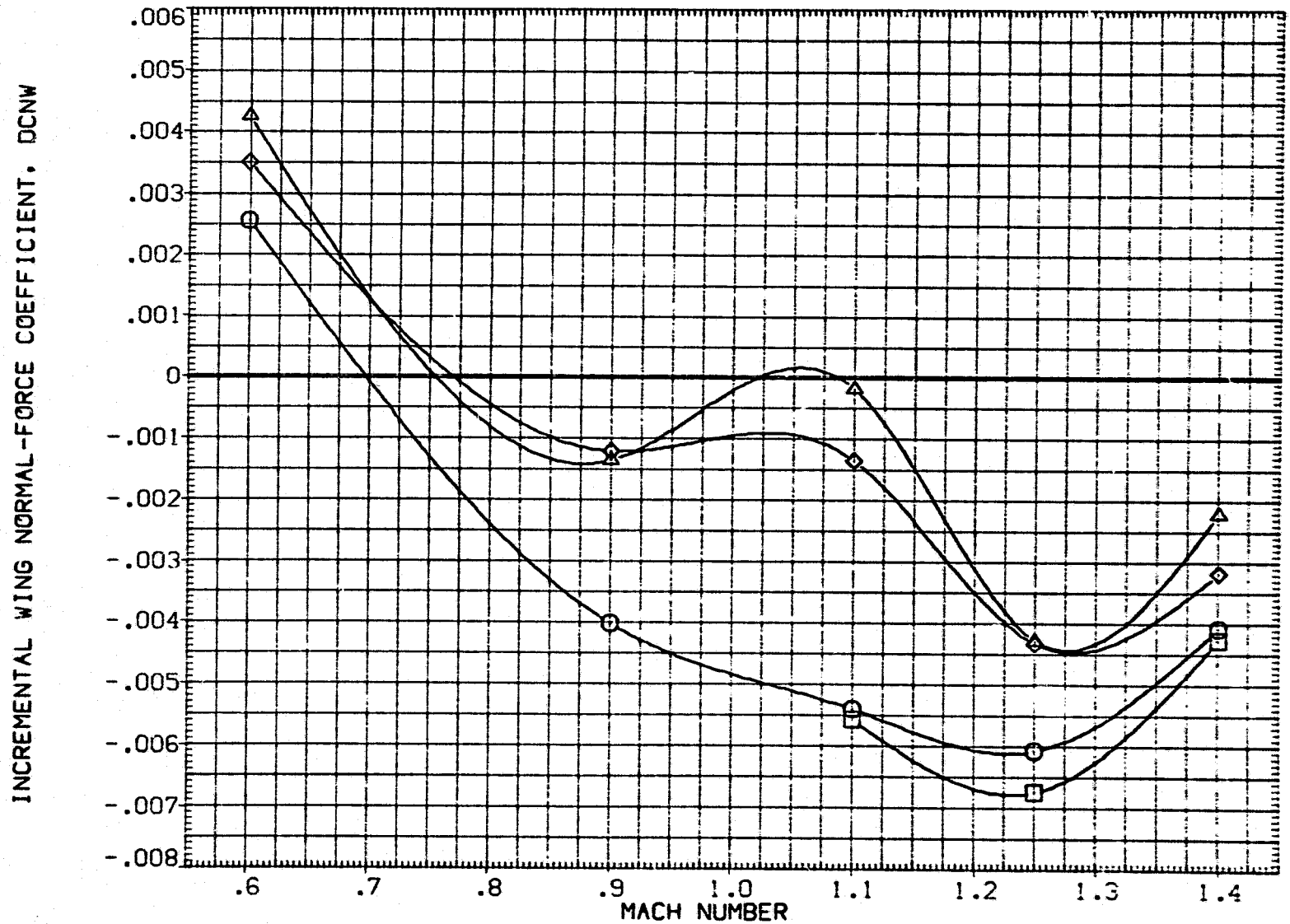



FIG. 110 SUMMARY, SRB PLUME SIZE EFFECTS ON WING LOADS

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (RE4N20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N25) | | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N06) | | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N01) | | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

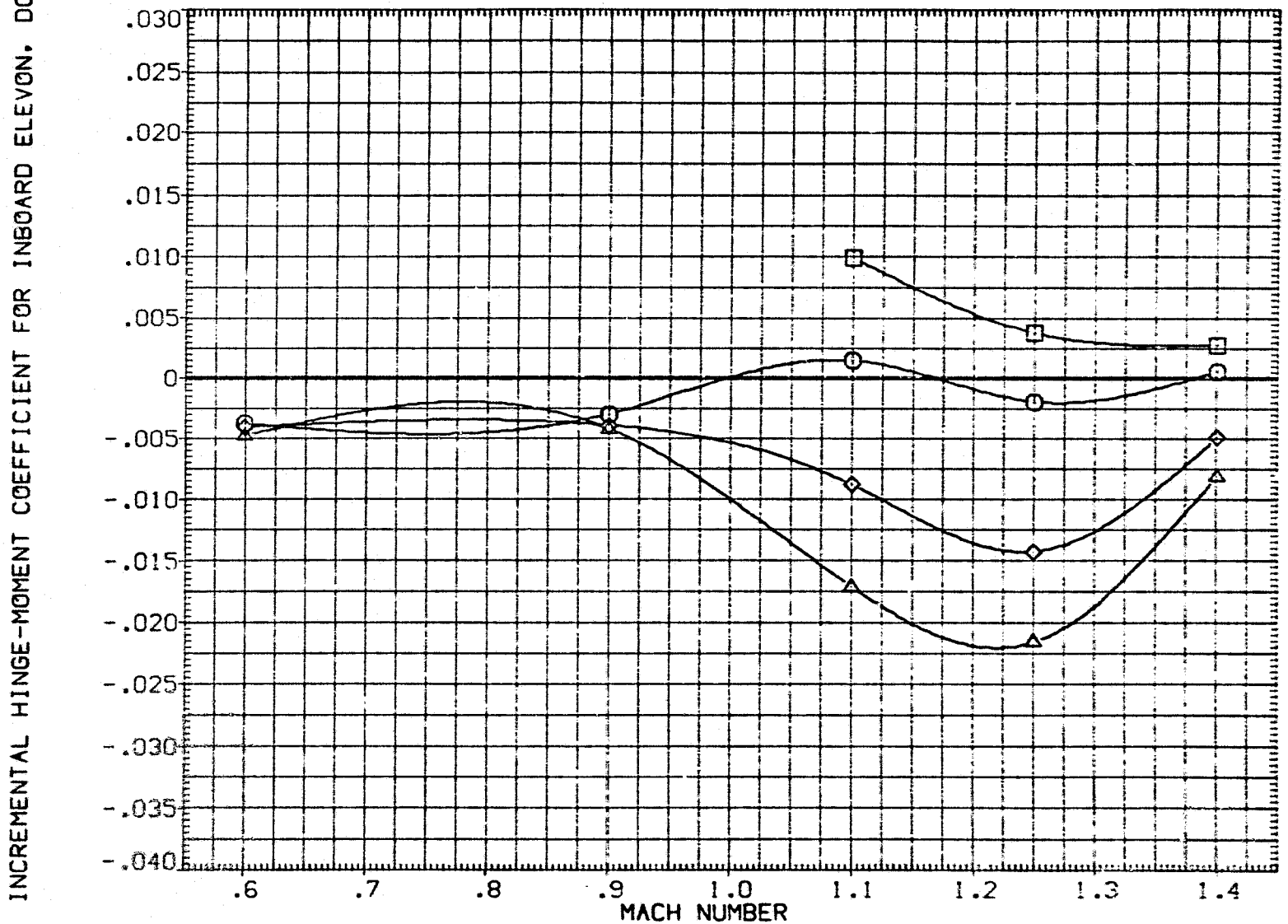



FIG. 111 SUMMARY, SRB PLUME SIZE EFFECTS ON ELEVON HINGE MOMENTS

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (RE4N20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N25) | ◇□ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N06) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N01) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

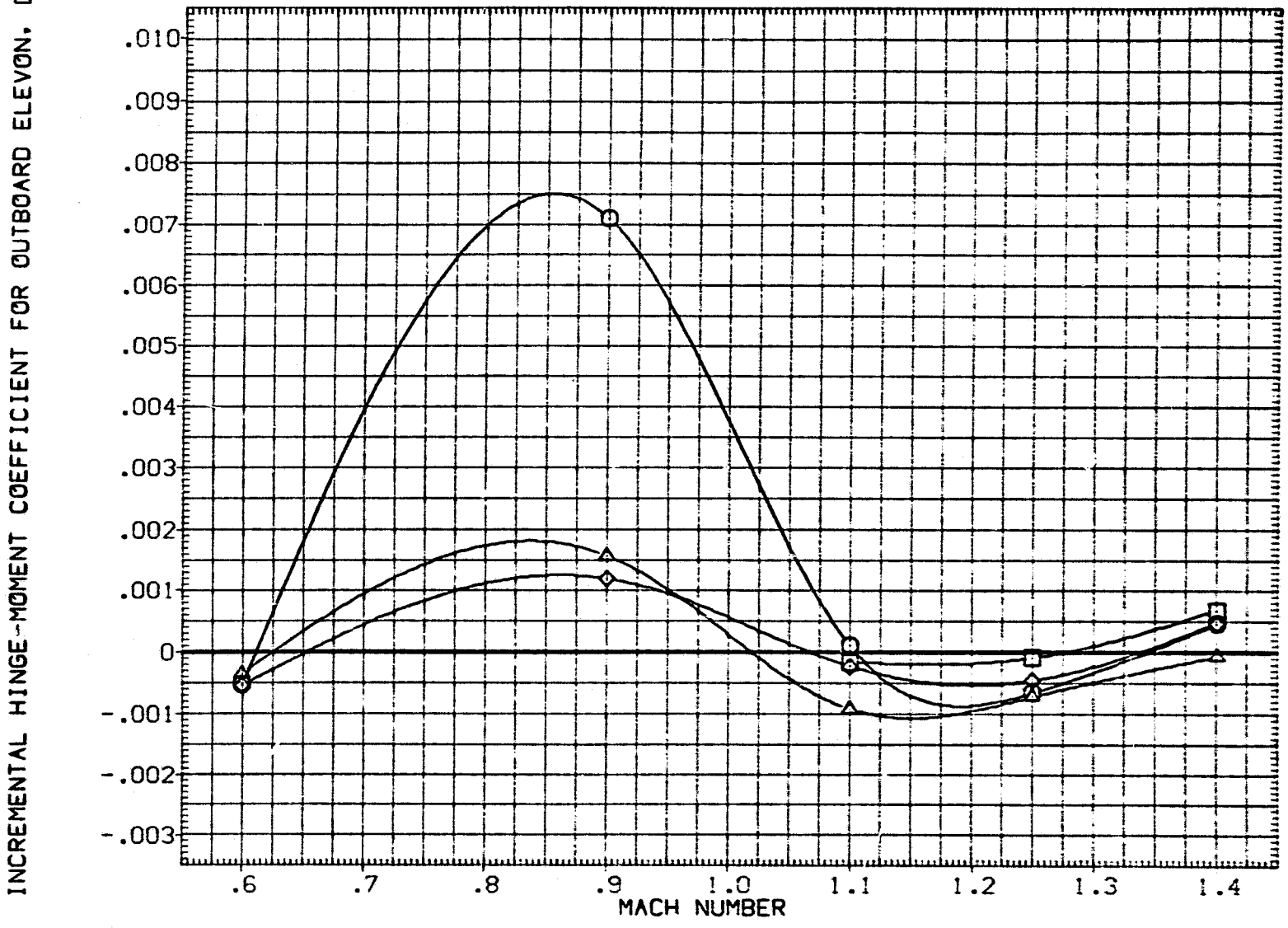



FIG. 111 SUMMARY, SRB PLUME SIZE EFFECTS ON ELEVON HINGE MOMENTS

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | DELVIB | DELVOB | ALPHA |
|---|---|---|---|---|---|
| (RE4NA0) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .000 |
| (RE4N90) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .000 |
| (RE4N74) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .000 |
| (RE4N84) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .000 |
| (RE4N53) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .000 |
| (RE4N64) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | - .000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

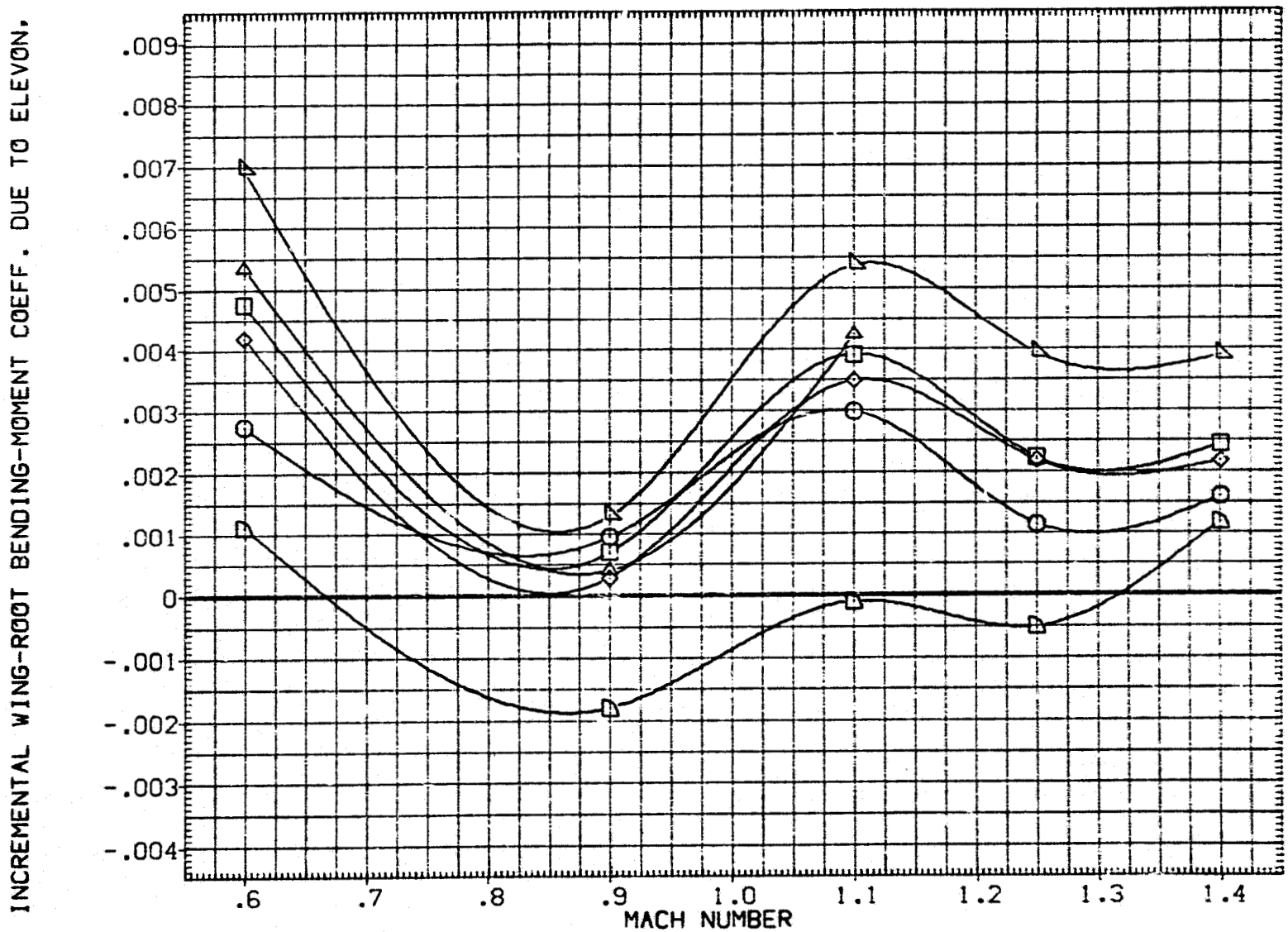



FIG. 112 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | DELVIB | DELVOB | ALPHA |
|---|---|---|---|---|---|
| (RE4NA0) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .000 |
| (RE4N90) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .000 |
| (RE4N74) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .000 |
| (RE4N84) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .000 |
| (RE4N53) | ▷ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .000 |
| (RE4N64) | ▽ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

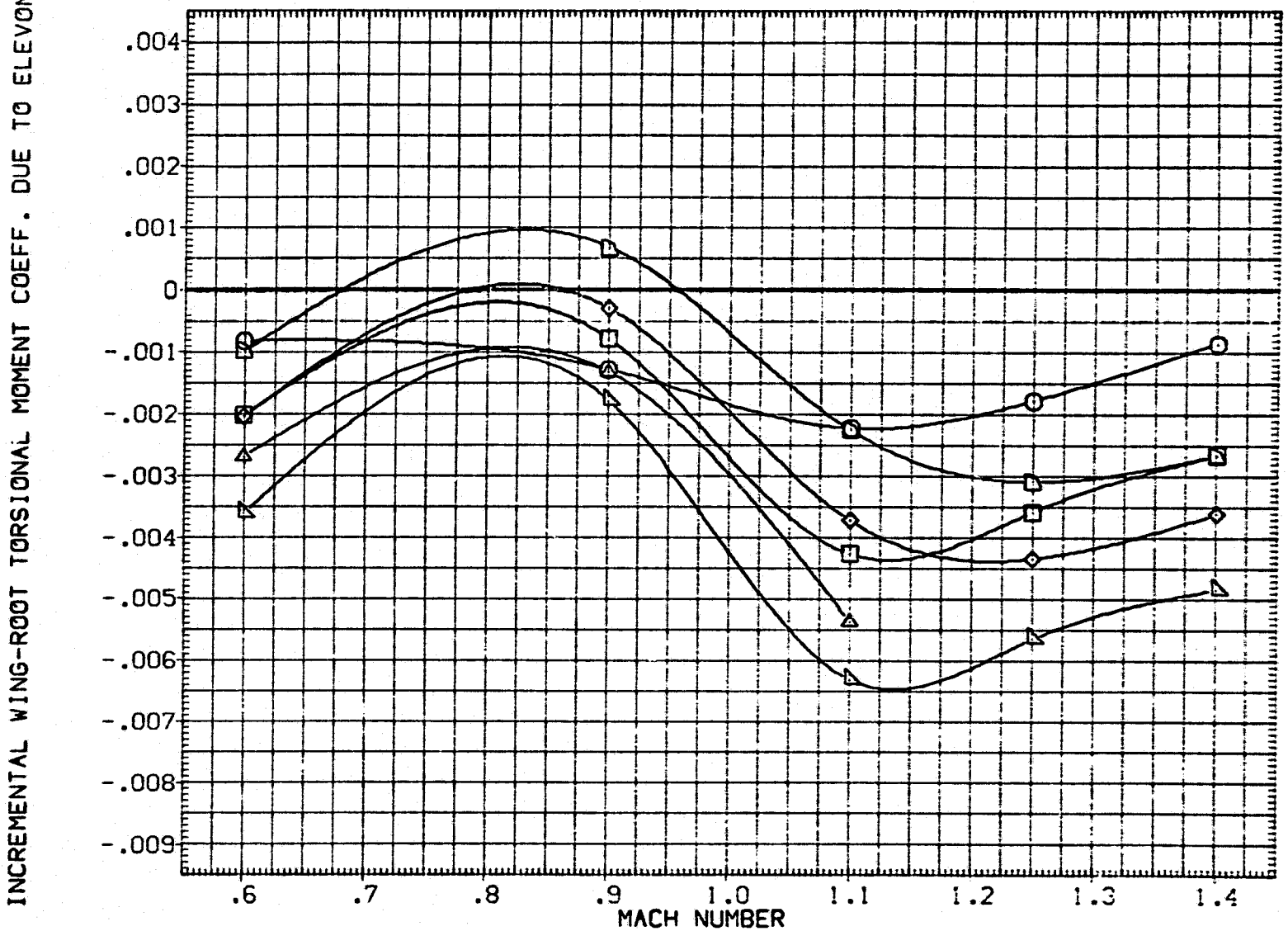



FIG. 112 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | DELVIB | DELVOB | ALPHA |
|---|---|---|---|---|---|
| (RE4NA0) | □ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .000 |
| (RE4N90) | □ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .000 |
| (RE4N74) | ◇ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .000 |
| (RE4N84) | ◇ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .000 |
| (RE4N53) | △ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .000 |
| (RE4N64) | △ | ARC 11-023 1A80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

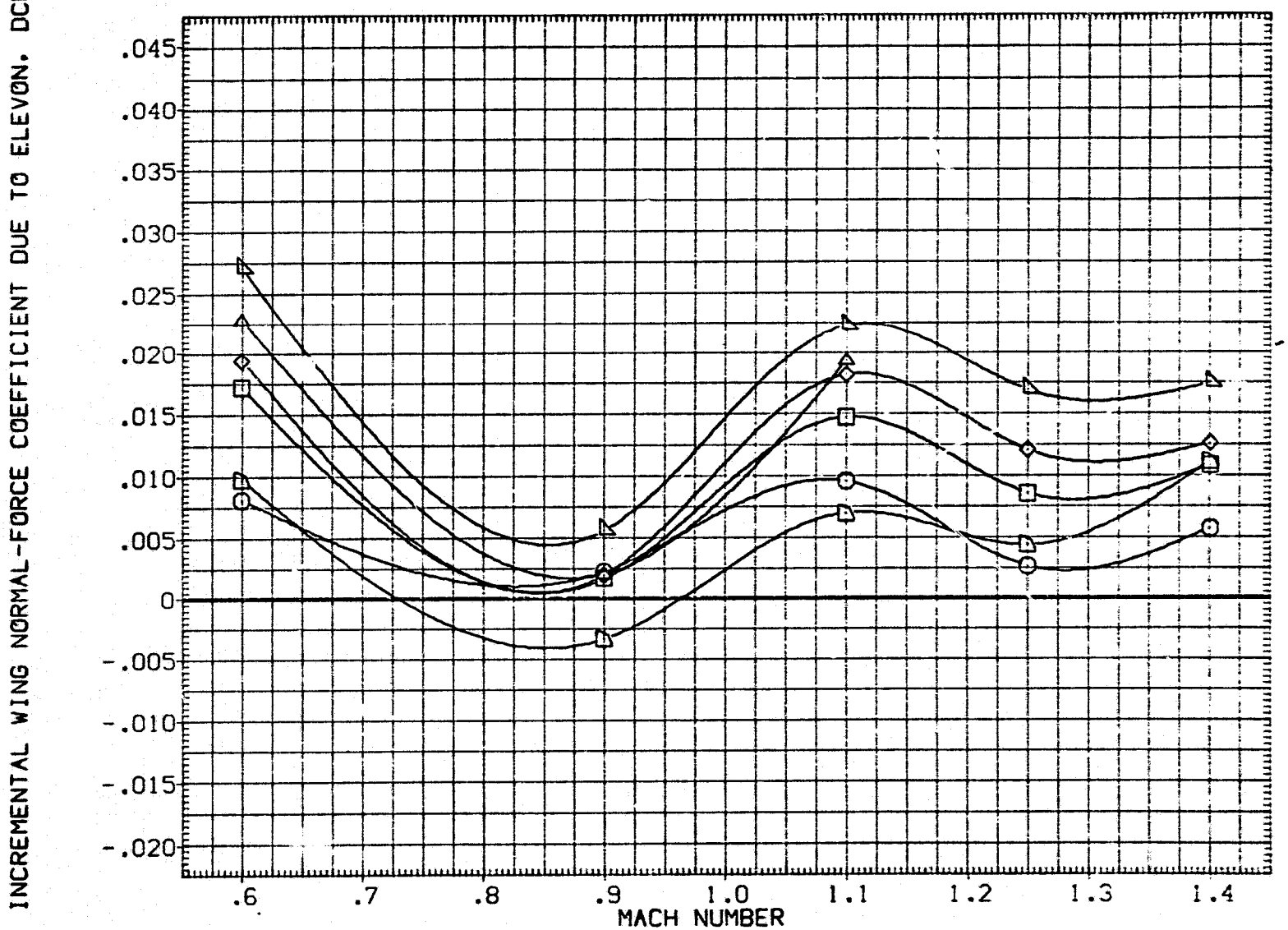



FIG. 112 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER OFF

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | DELVIB | DELVOB | ALPHA |
|---|---|---|---|---|
| (RE4NA5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .000 |
| (RE4N95) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .000 |
| (RE4N79) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .000 |
| (RE4N97) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .000 |
| (RE4N58) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .000 |
| (RE4N69) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

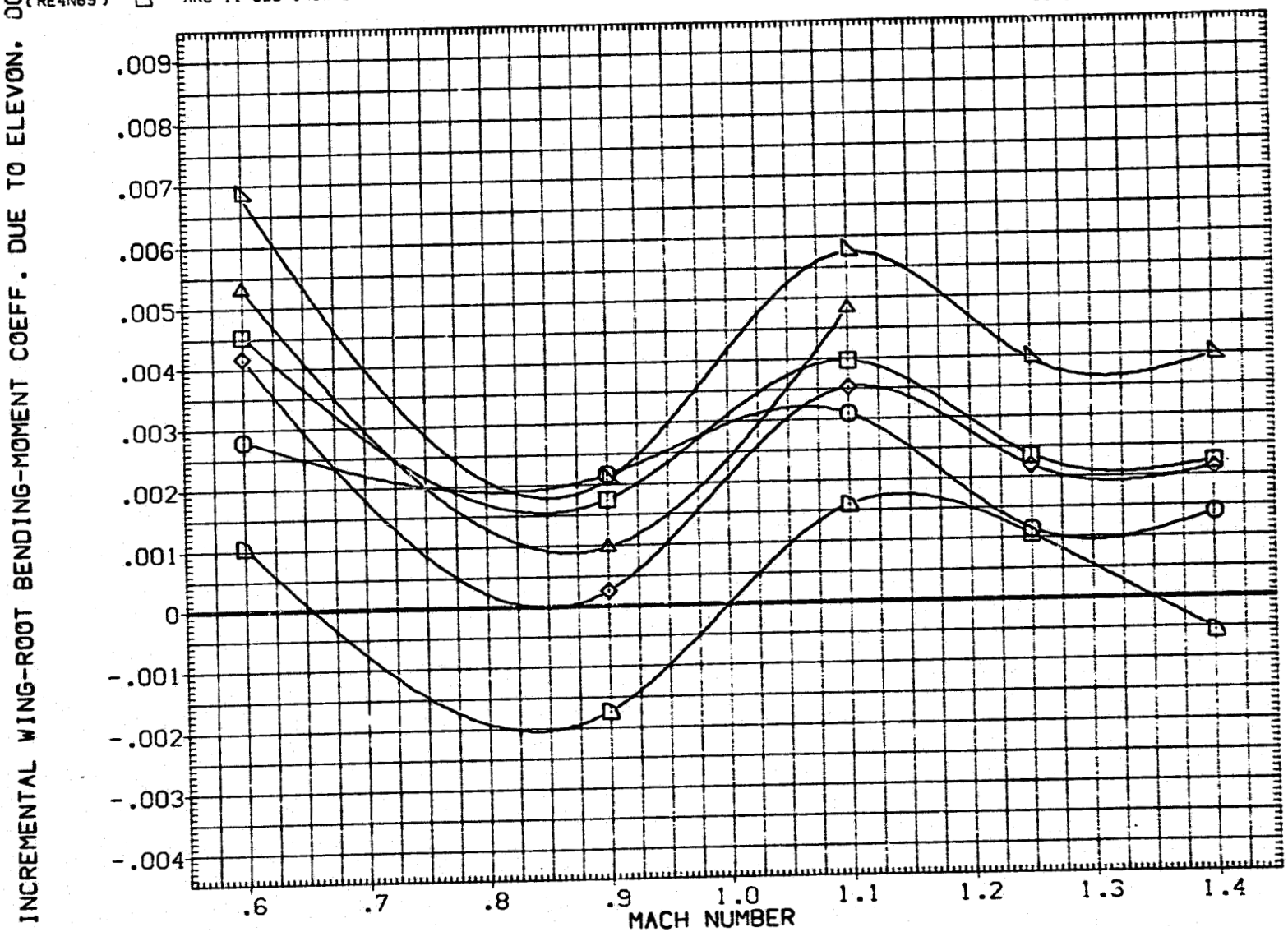



FIG. 113 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER ON

(A)BETA = .00

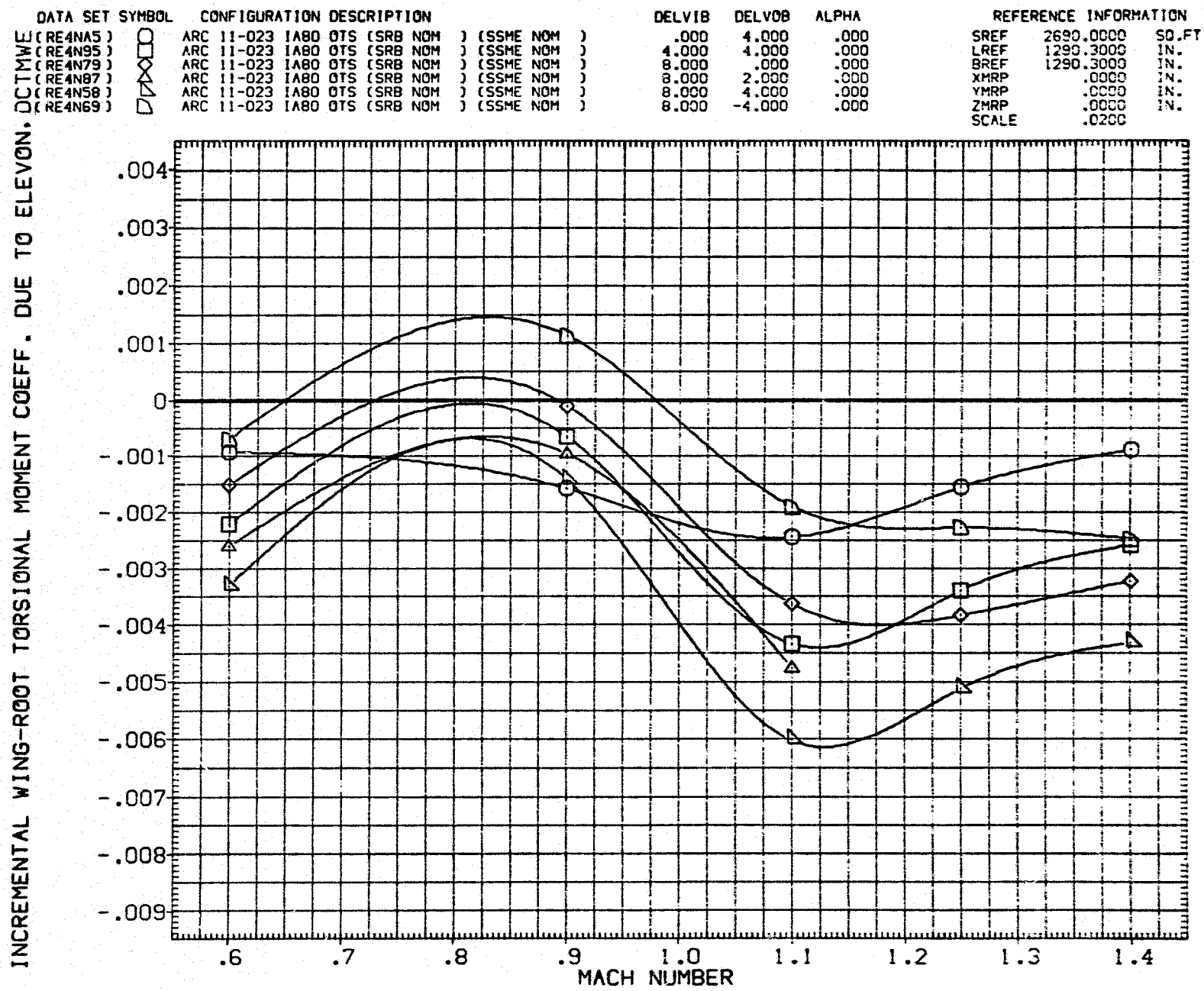



FIG. 113 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | DELVIB | DELVOB | ALPHA |
|---|---|---|---|---|---|
| (RE4NA5) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .000 |
| (RE4N95) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .000 |
| (RE4N79) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .000 |
| (RE4N87) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .000 |
| (RE4N58) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .000 |
| (RE4N69) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

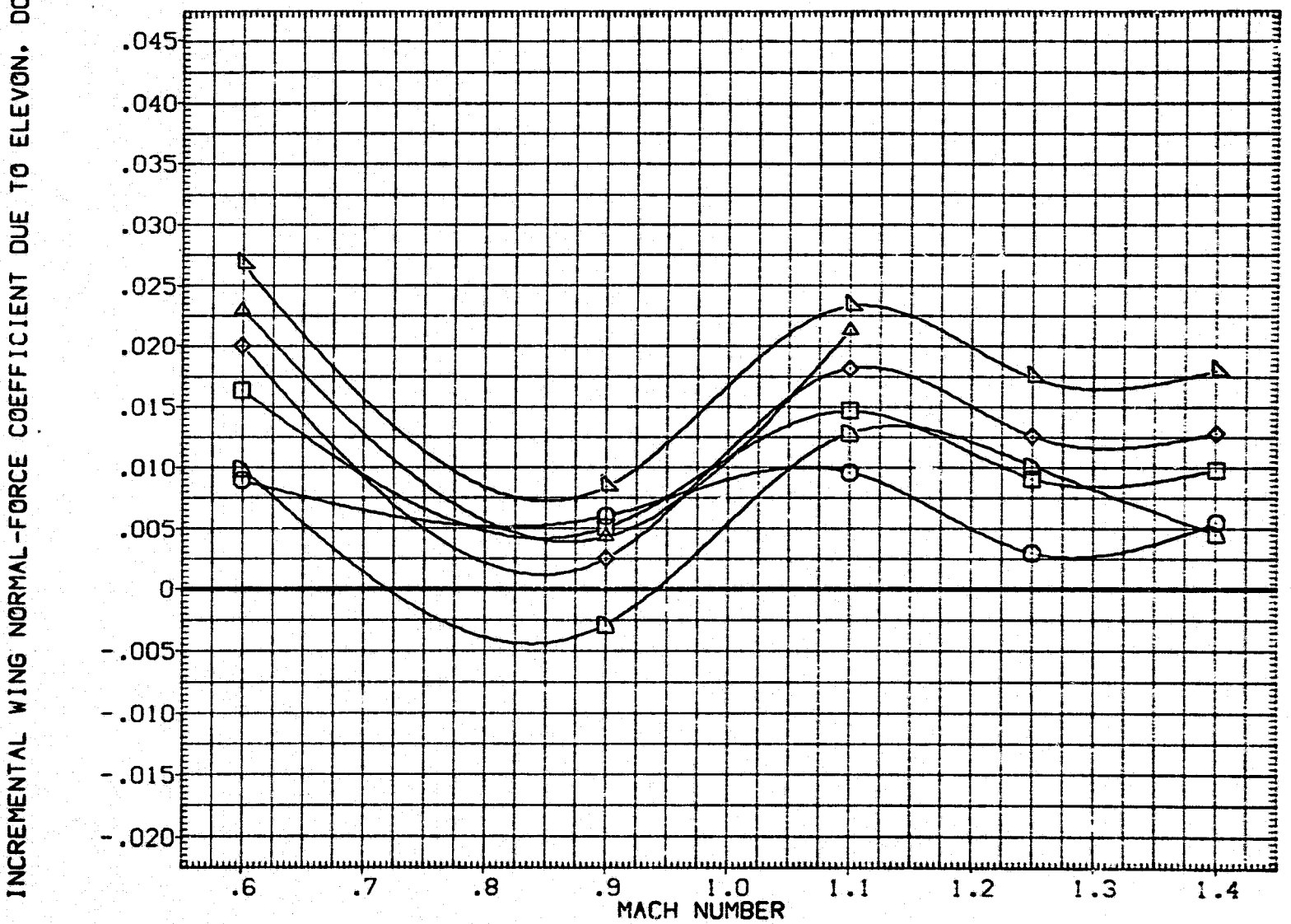



FIG. 113 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | DELVIB | DELVOB | ALPHA |
|---|---|---|---|---|---|
| (RE4NA0) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .000 |
| (RE4N90) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .000 |
| (RE4N74) | ◇ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .000 |
| (RE4N84) | △ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .000 |
| (RE4N53) | ▽ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .000 |
| (RE4N64) | ▷ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

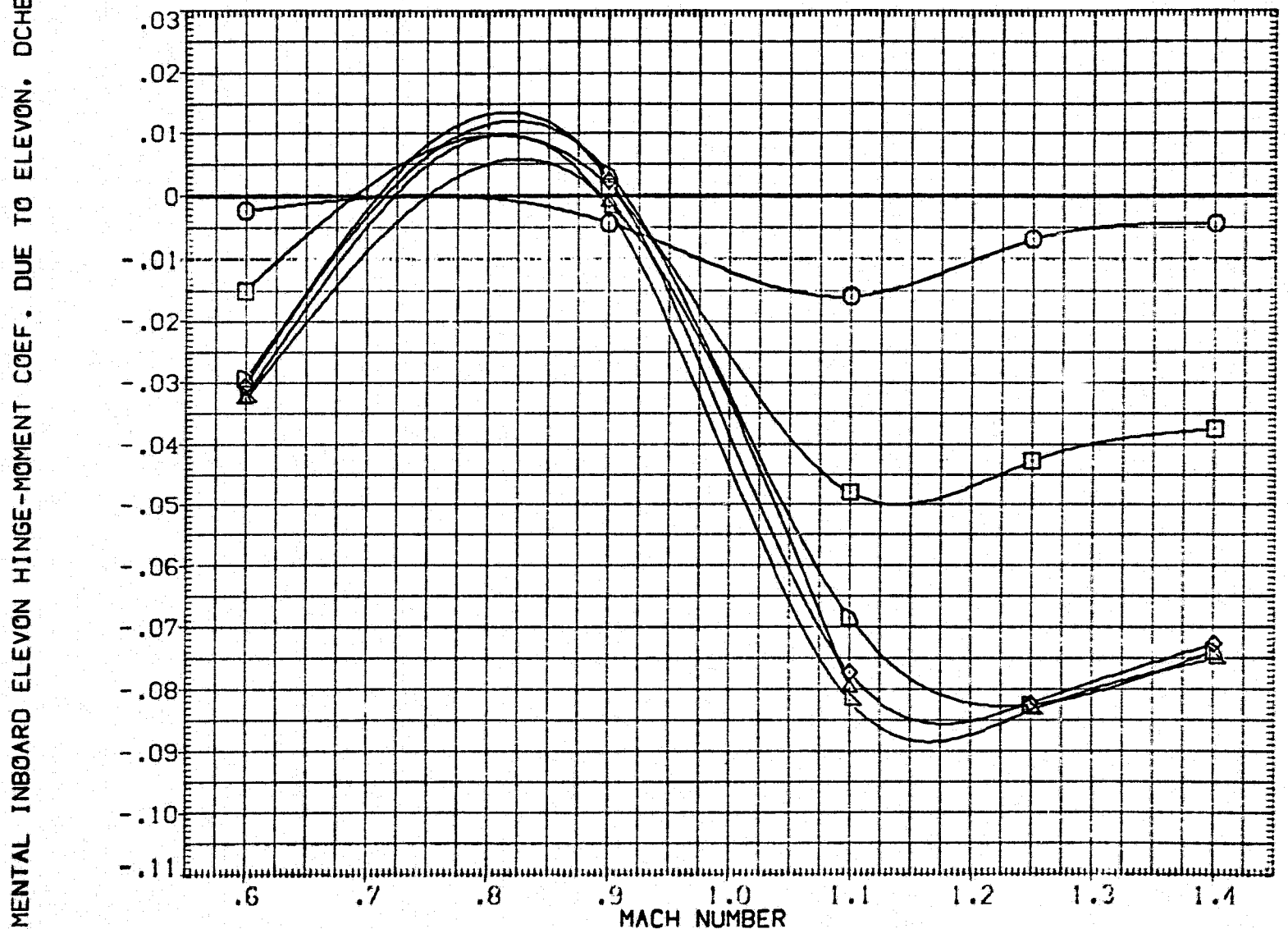



FIG. 114 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON ELEVON HINGE MOMENTS POWER OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | DELVIB | DELVOB | ALPHA |
|---|---|---|---|---|---|
| (RE4NA0) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | 4.000 | .000 |
| (RE4N90) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 4.000 | 4.000 | .000 |
| (RE4N74) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | .000 | .000 |
| (RE4N84) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 2.000 | .000 |
| (RE4N53) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .000 |
| (RE4N64) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | -4.000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

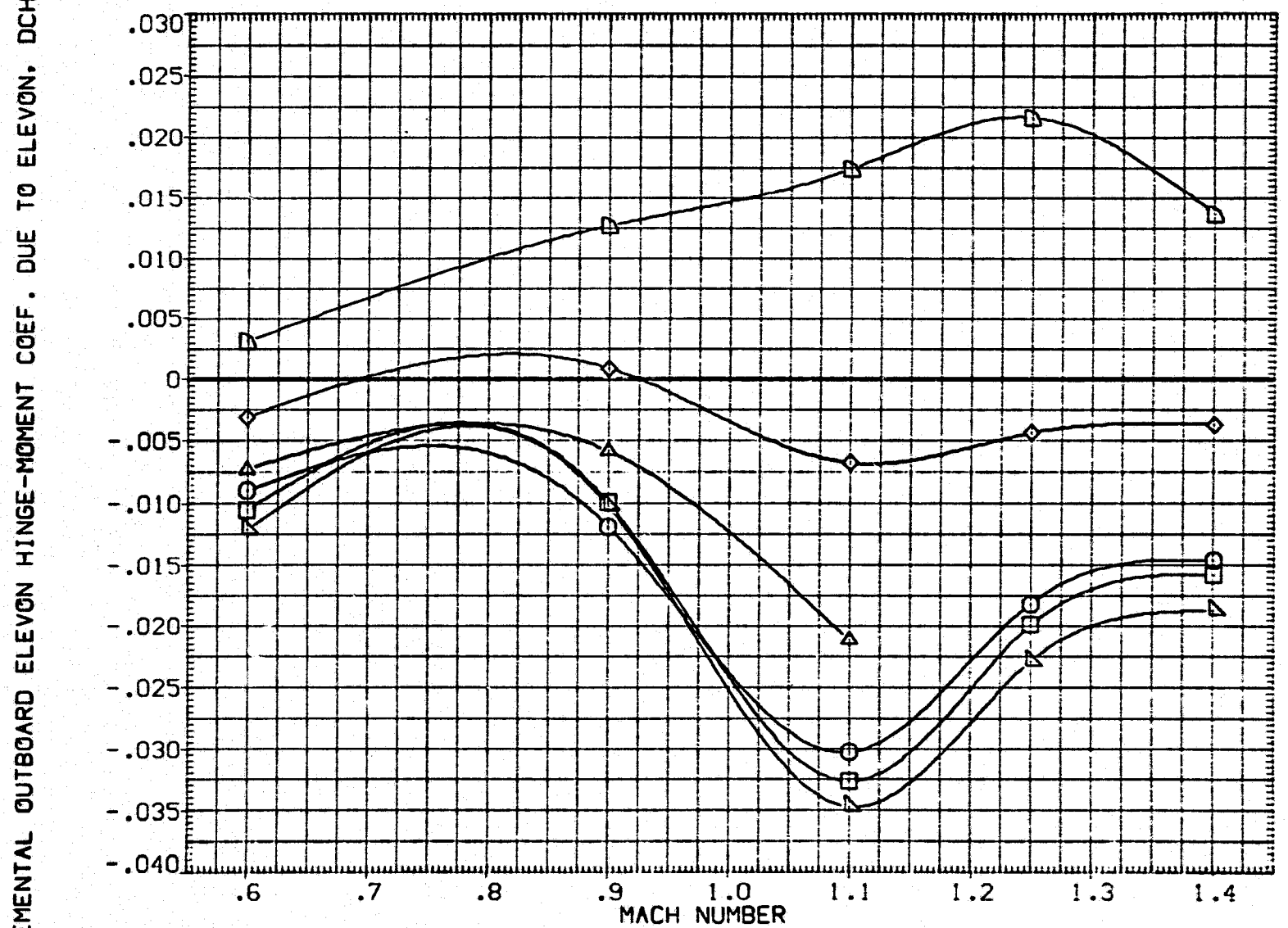



FIG. 114 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON ELEVON HINGE MOMENTS POWER OFF

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | DELVIB | DELVOB | ALPHA |
|---|---|---|---|---|---|
| (RE4NA5) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .000 |
| (RE4N95) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .000 |
| (RE4N79) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .000 |
| (RE4N87) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .000 |
| (RE4N58) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .000 |
| (RE4N69) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

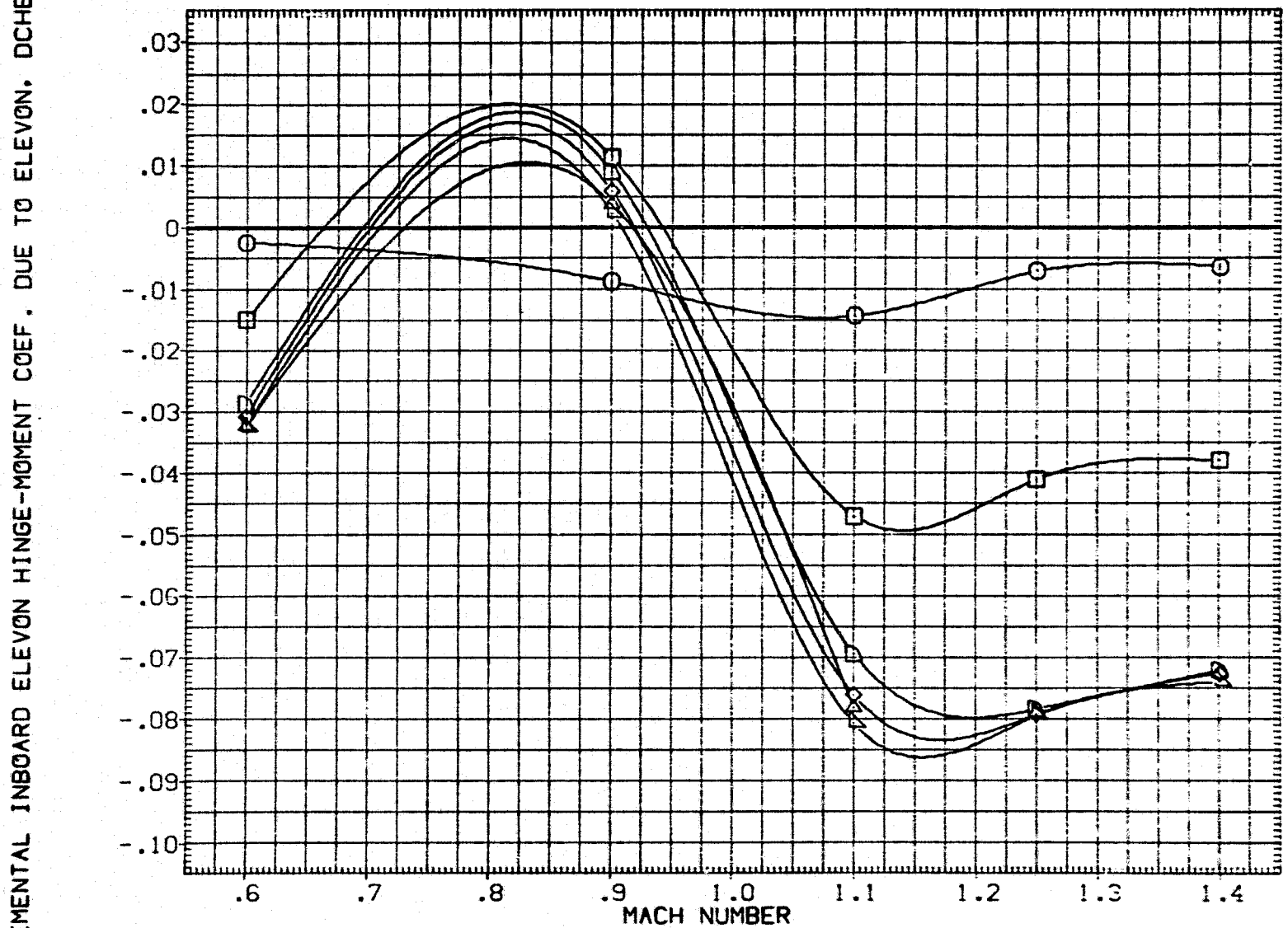



FIG. 115 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON ELEVON HINGE MOMENTS POWER ON

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | DELVIB | DELVOB | ALPHA |
|---|---|---|---|---|
| (RE4NA5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | 4.000 | .000 |
| (RE4N95) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 4.000 | 4.000 | .000 |
| (RE4N79) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | .000 | .000 |
| (RE4N87) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 2.000 | .000 |
| (RE4N58) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .000 |
| (RE4N69) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | -4.000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

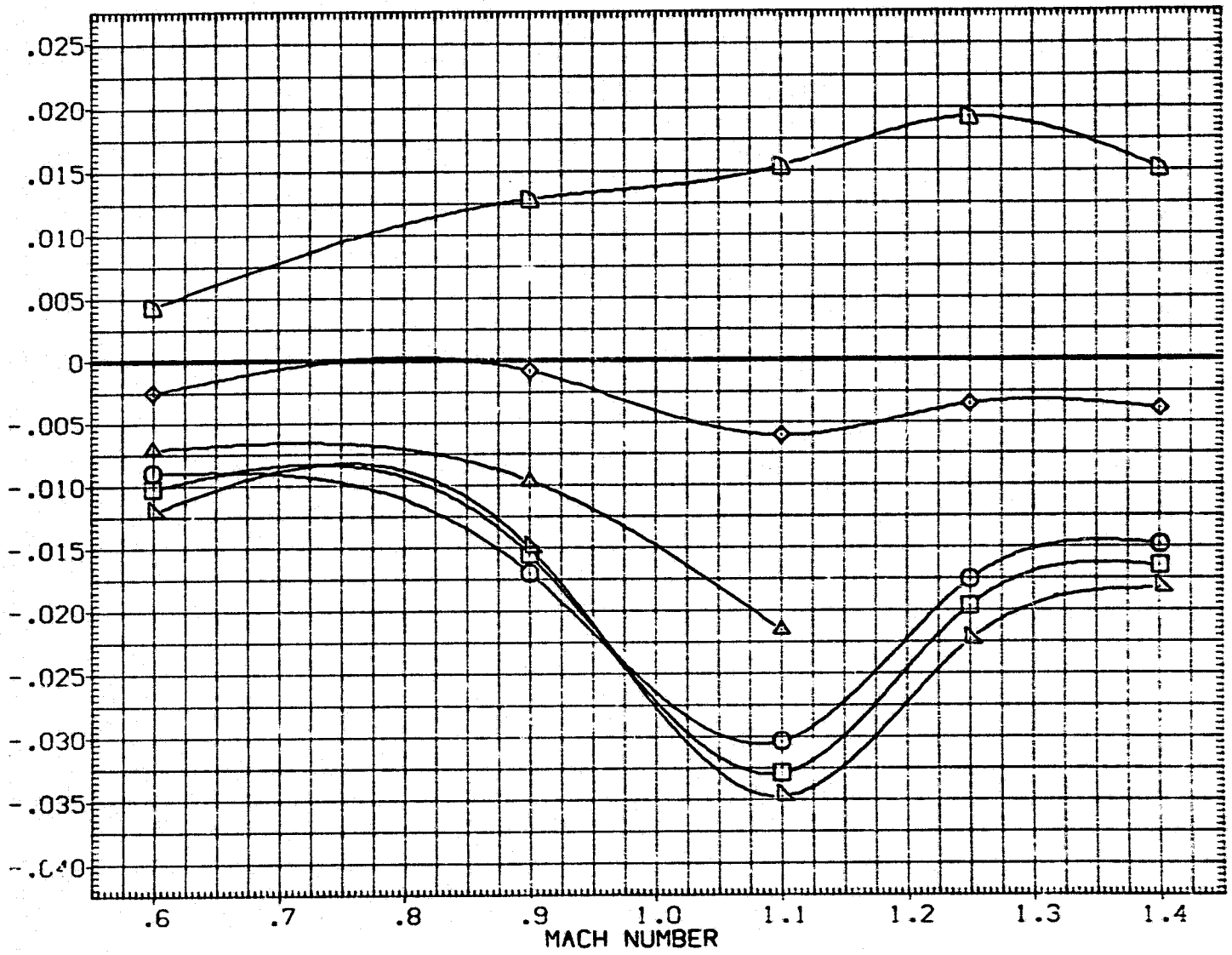



FIG. 115 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON ELEVON HINGE MOMENTS POWER ON

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (RE4N20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N16) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (RE4N11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (RE4NB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

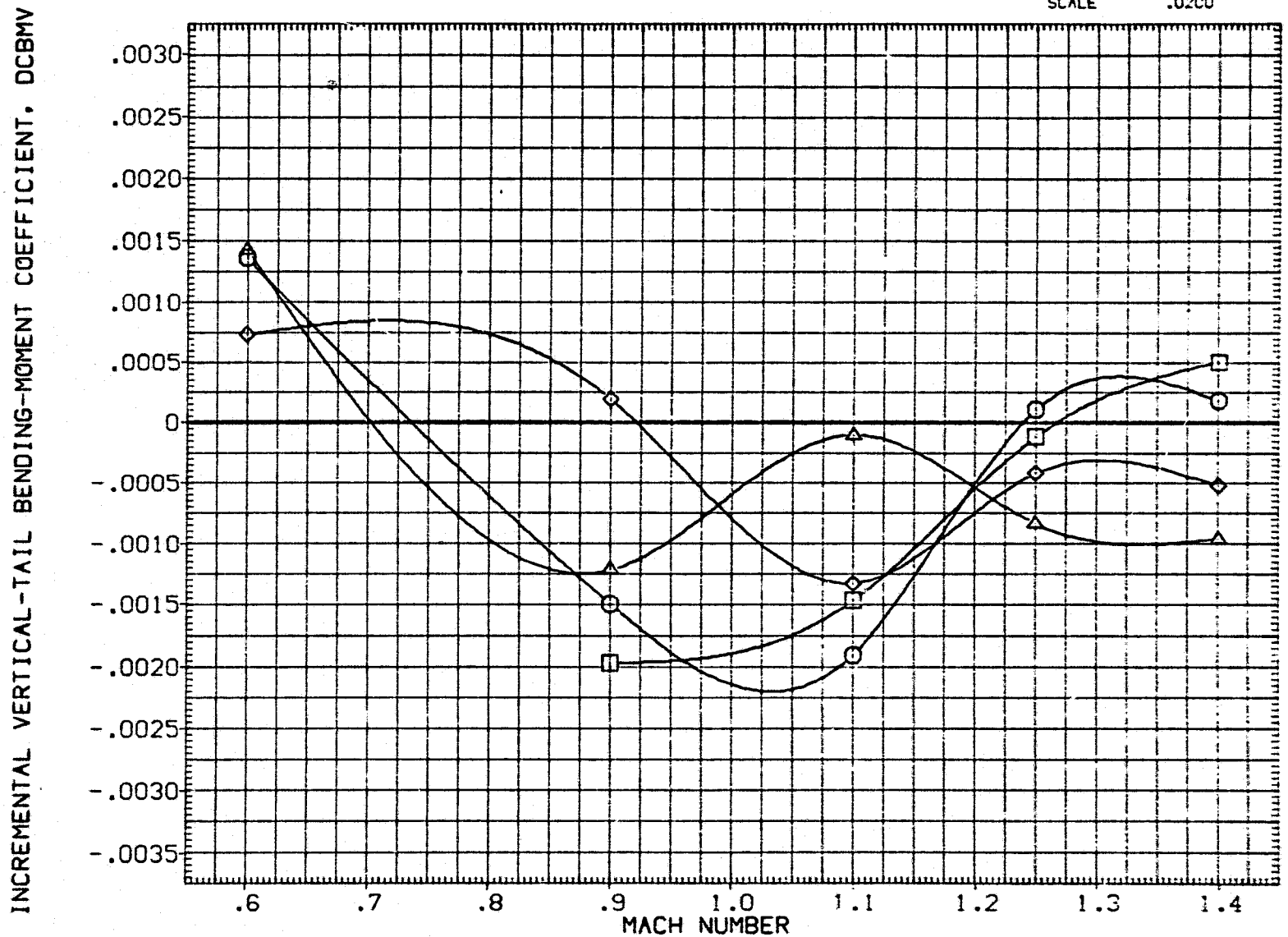



FIG. 116 SUMMARY, EFFECTS SSME PLUME SIZE ON VERTICAL TAIL LOADS

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (RE4N20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (RE4N11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (RE4N85) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

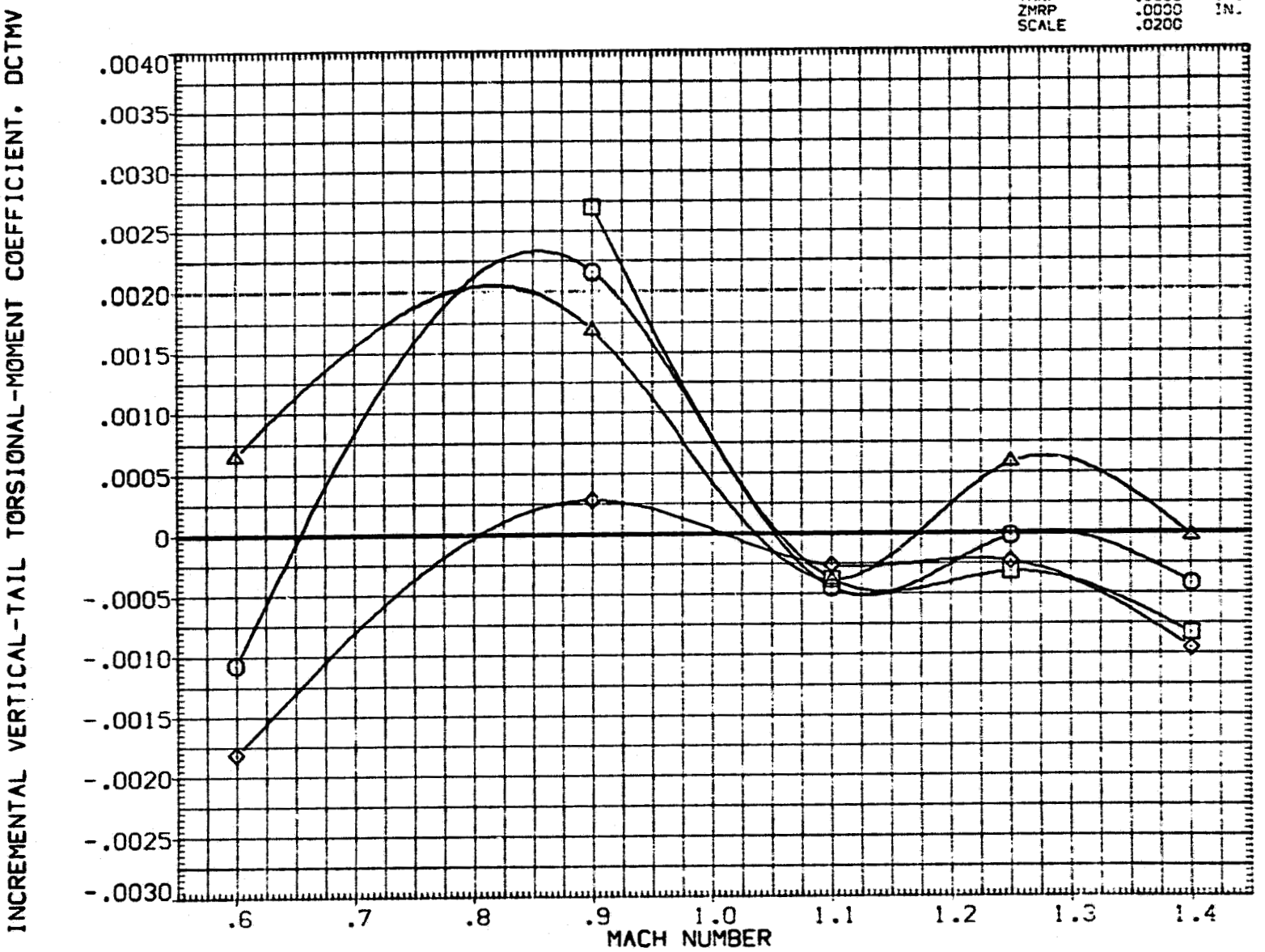



FIG. 116 SUMMARY, EFFECTS SSME PLUME SIZE ON VERTICAL TAIL LOADS

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (RE4N20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N16) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (RE4N11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (RE4NB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRF | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

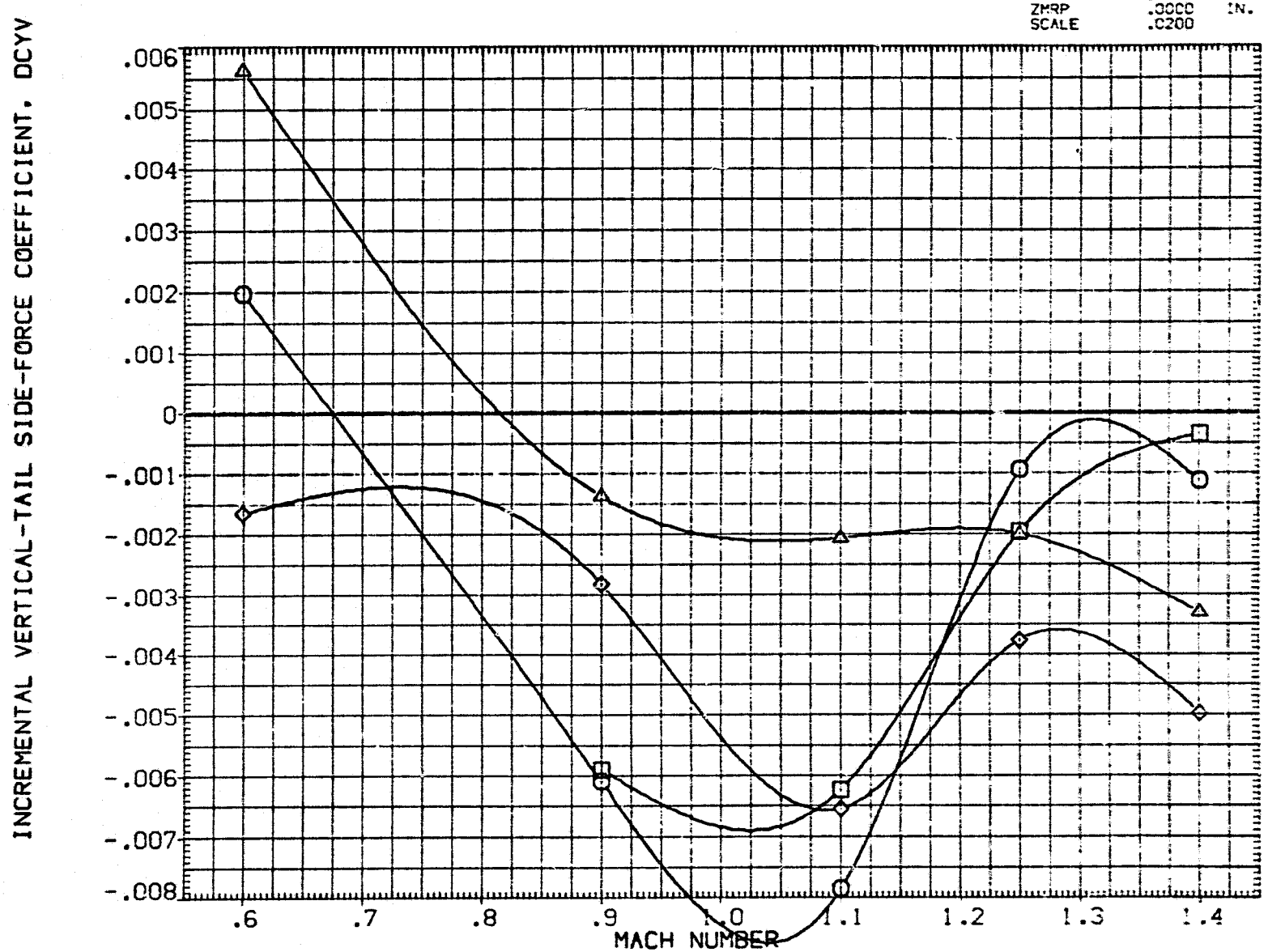



FIG. 116 SUMMARY, EFFECTS SSME PLUME SIZE ON VERTICAL TAIL LOADS

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (RE4N20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (RE4N16) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (RE4N11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (RE4N85) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

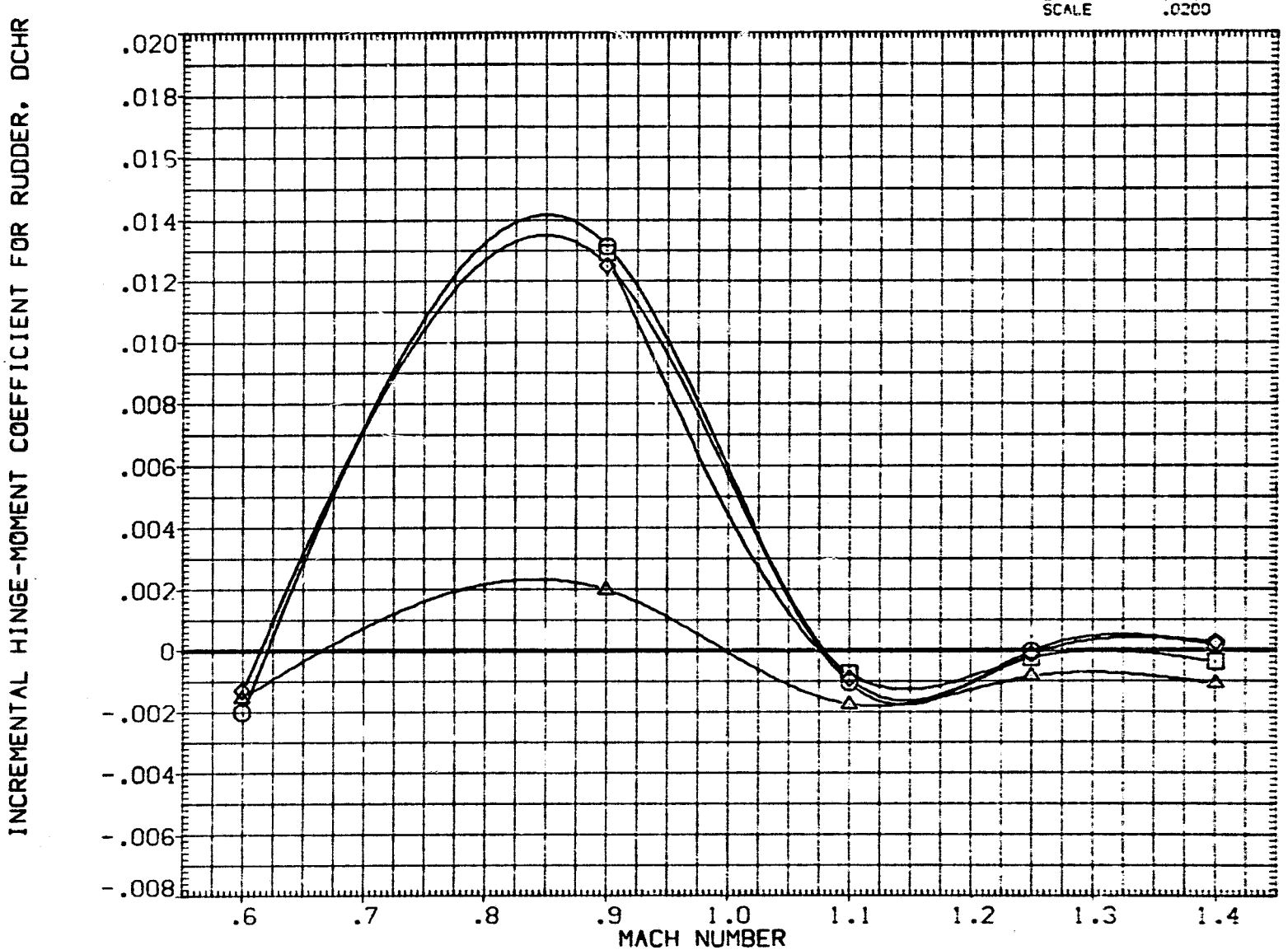



FIG. 117 SUMMARY, EFFECTS SSME PLUME SIZE ON RUDDER HINGE MOMENTS

(A)BETA = .00

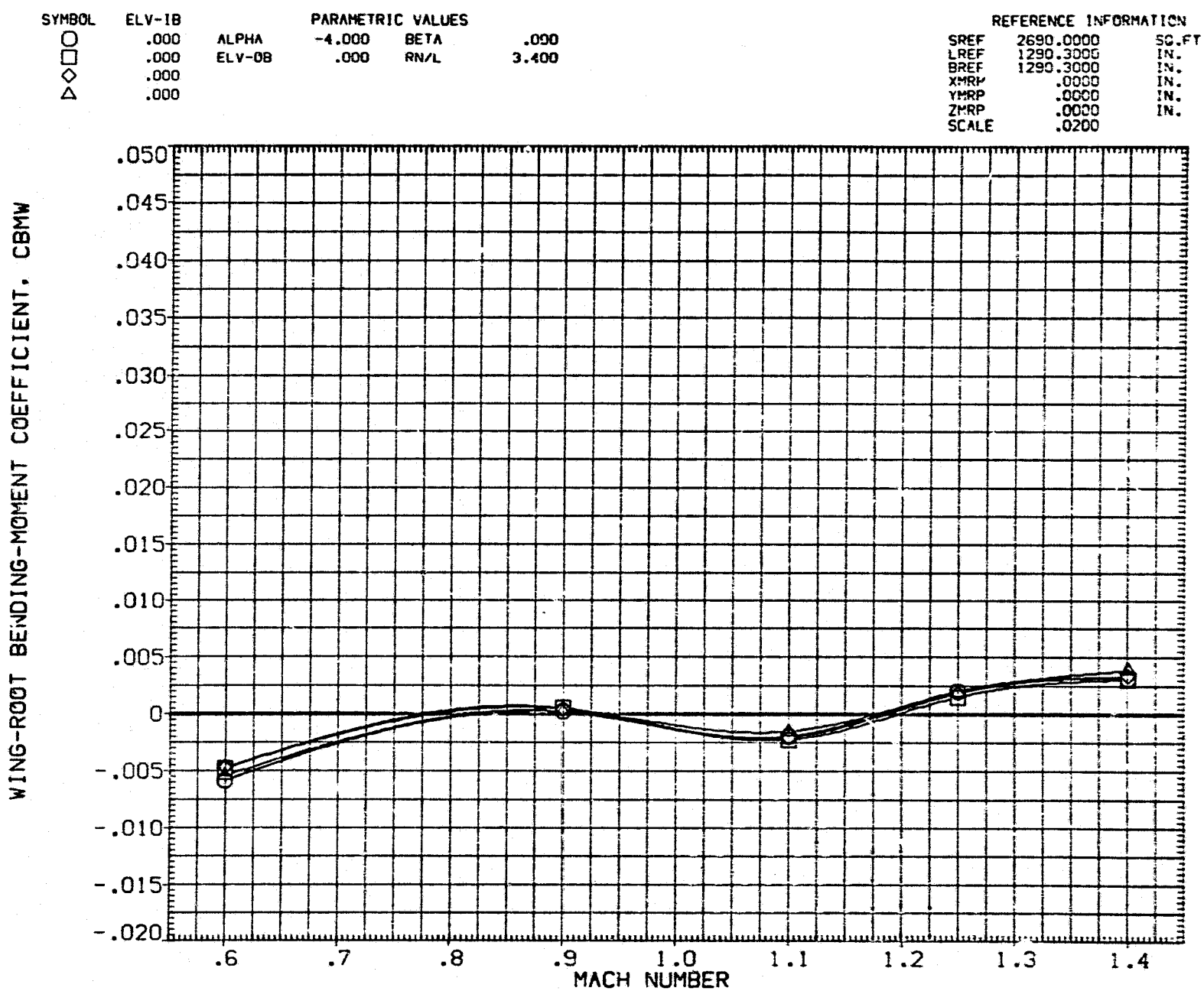



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

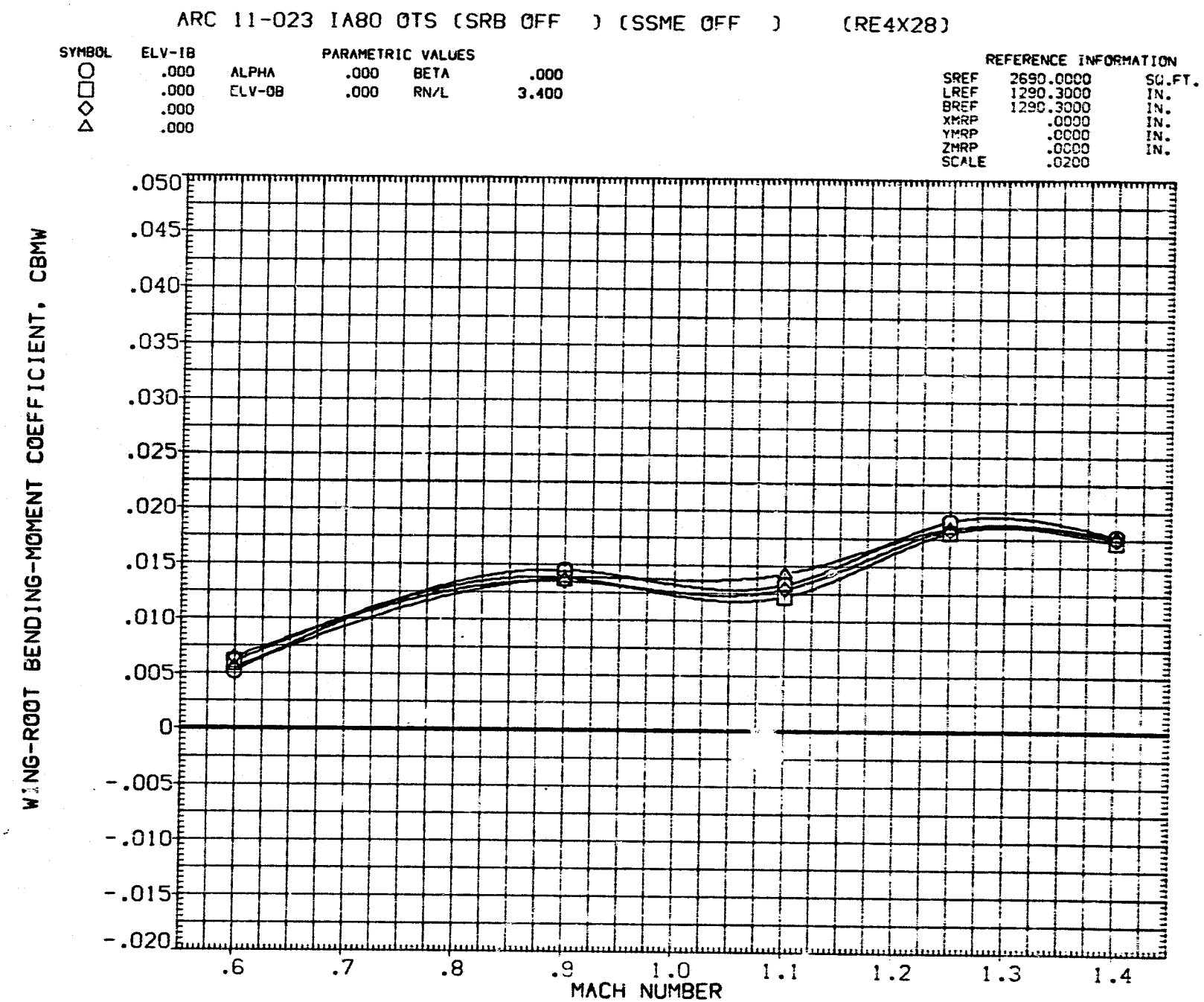



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

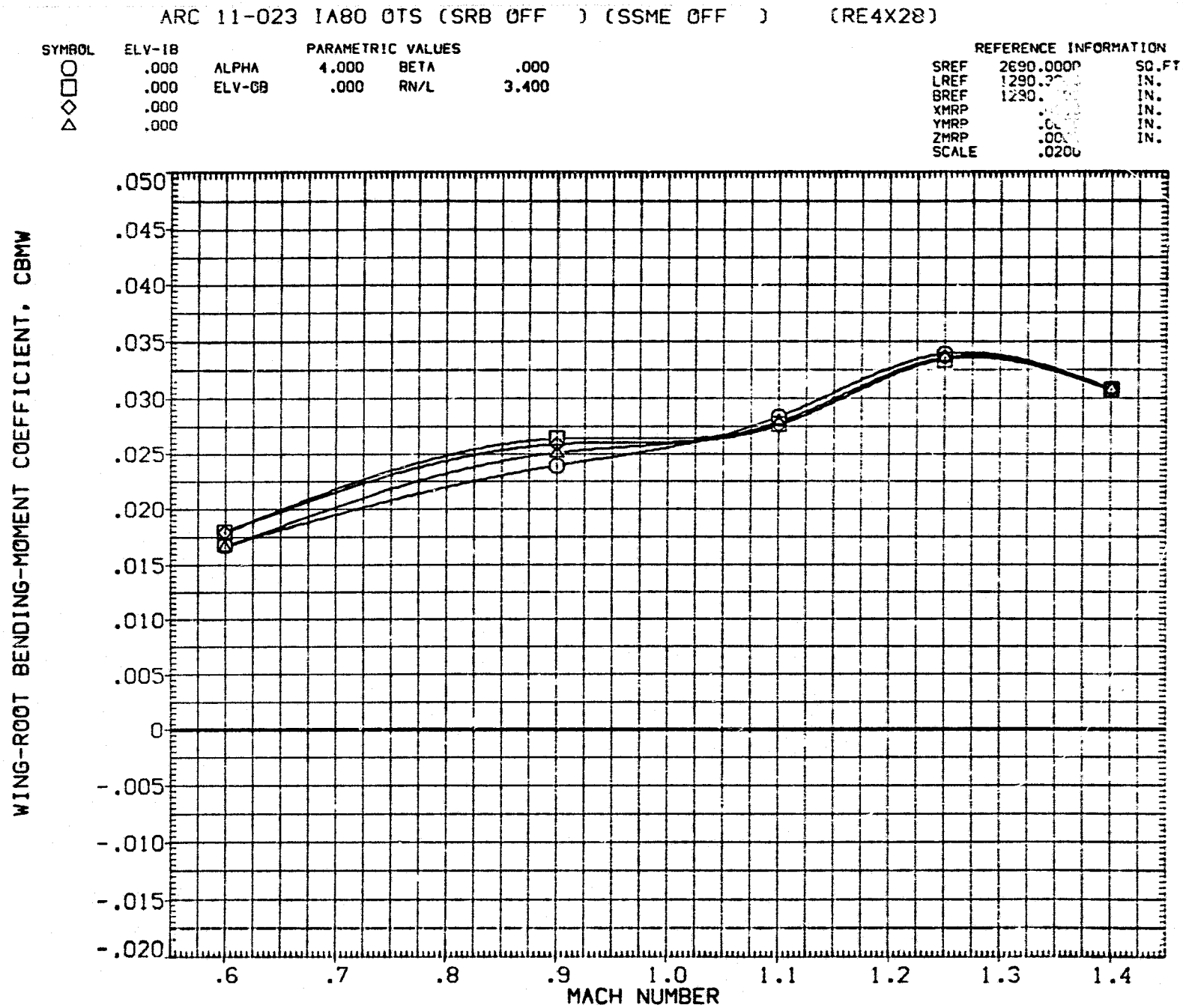



FIG. 118 EFFECT 0F SSME PLUME SIZE 0N WING L0ADS

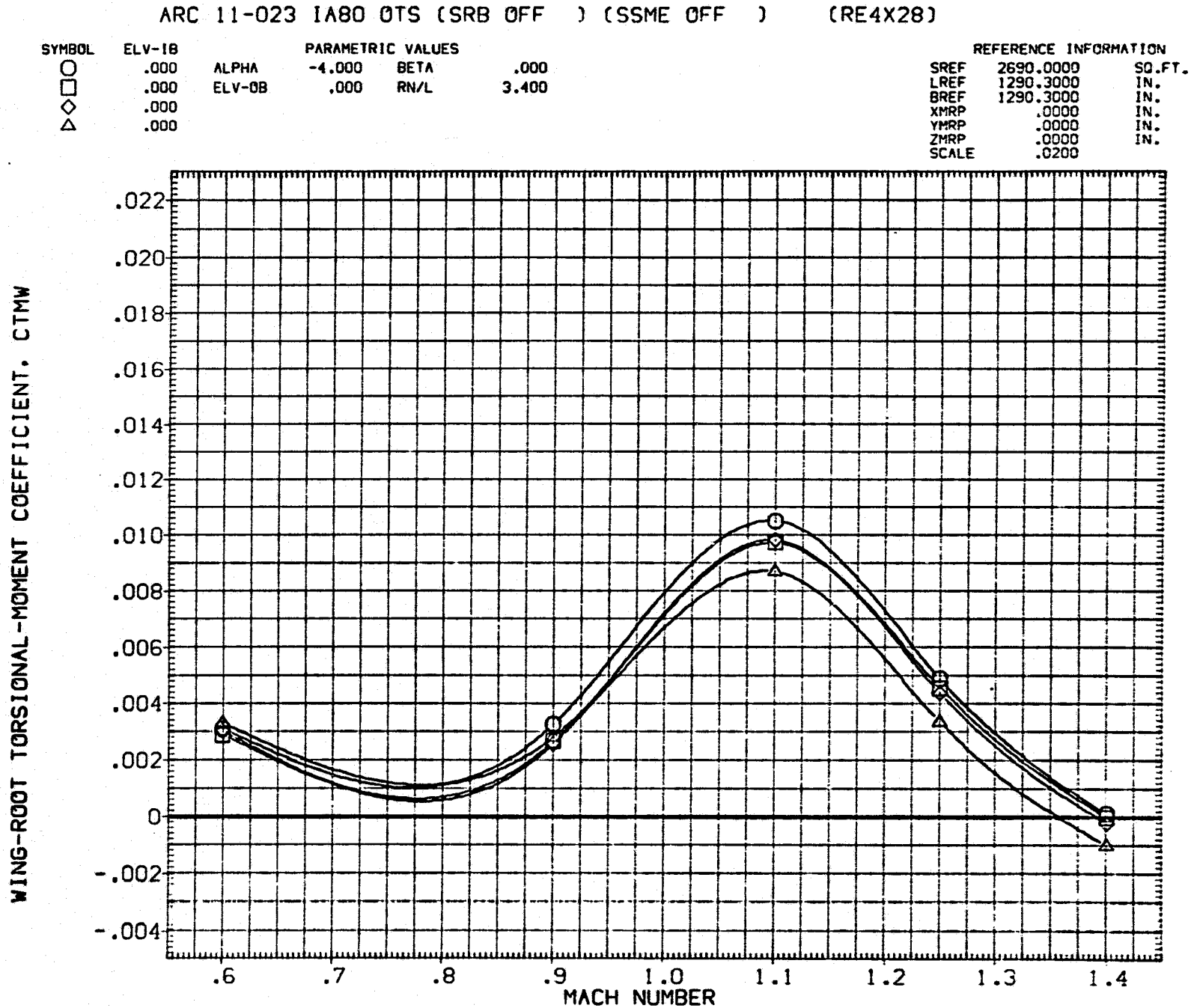



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

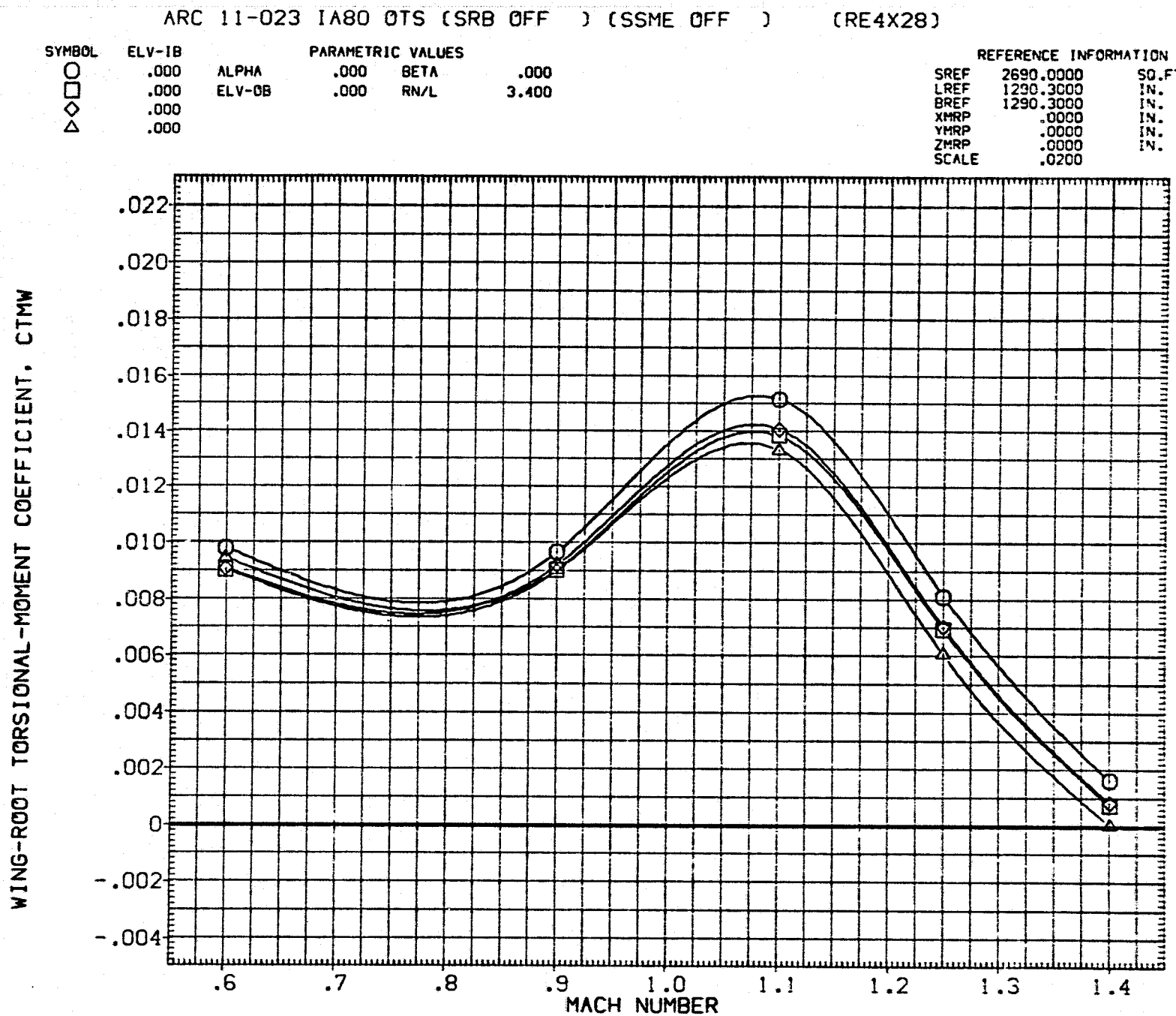



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

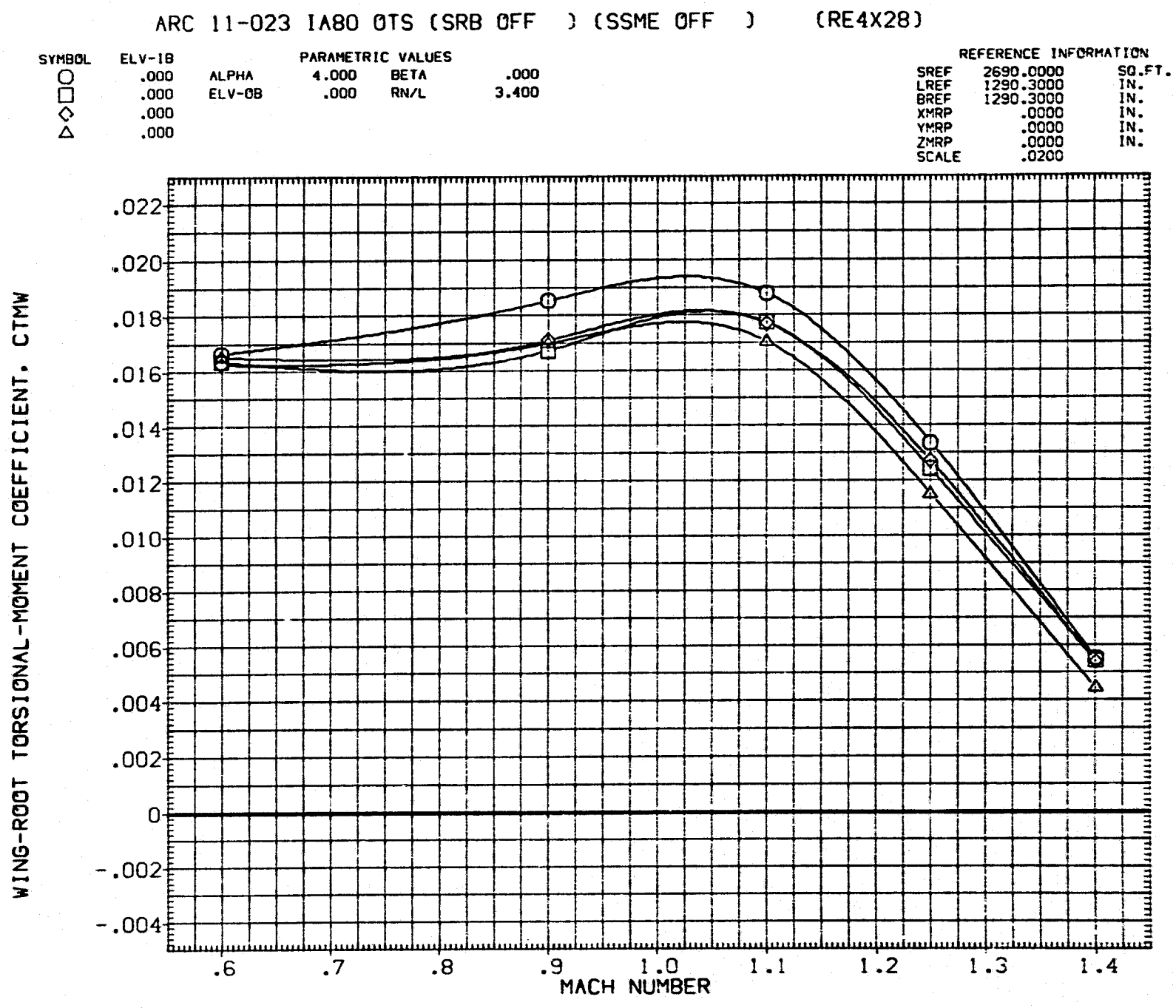



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 IA80 0TS (SRB 0FF ) (SSME 0FF ) (RE4X28)

| SYMBOL | ELV-IB | | PARAMETRIC VALUES | | |
|---|---|---|---|---|---|
| ○ | .000 | ALPHA | -4.000 | BETA | .000 |
| □ | .000 | ELV-0B | .000 | RN/L | 3.400 |
| ◇ | .000 | | | | |
| △ | .000 | | | | |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

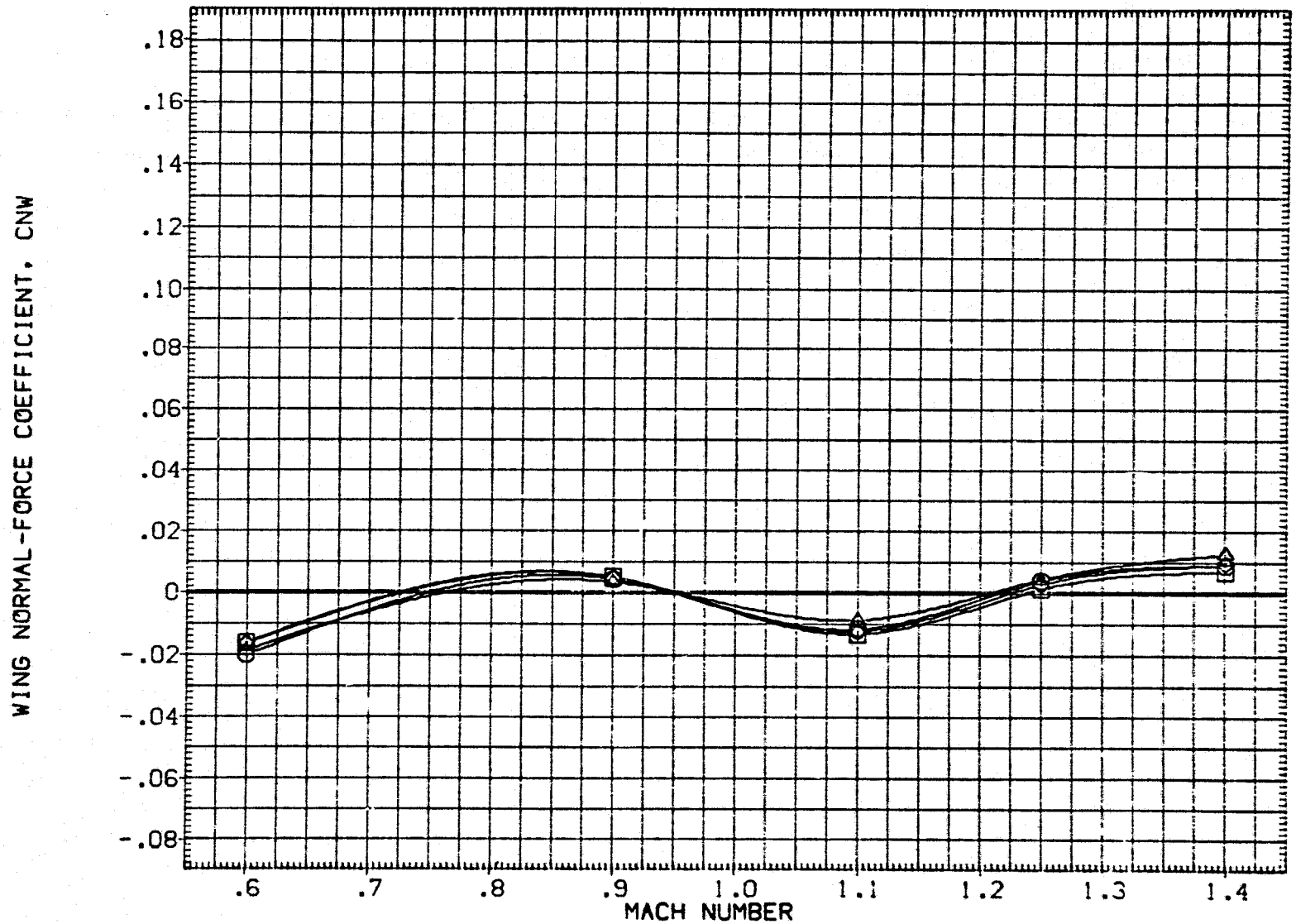



FIG. 118 EFFECT 0F SSME PLUME SIZE 0N WING L0ADS

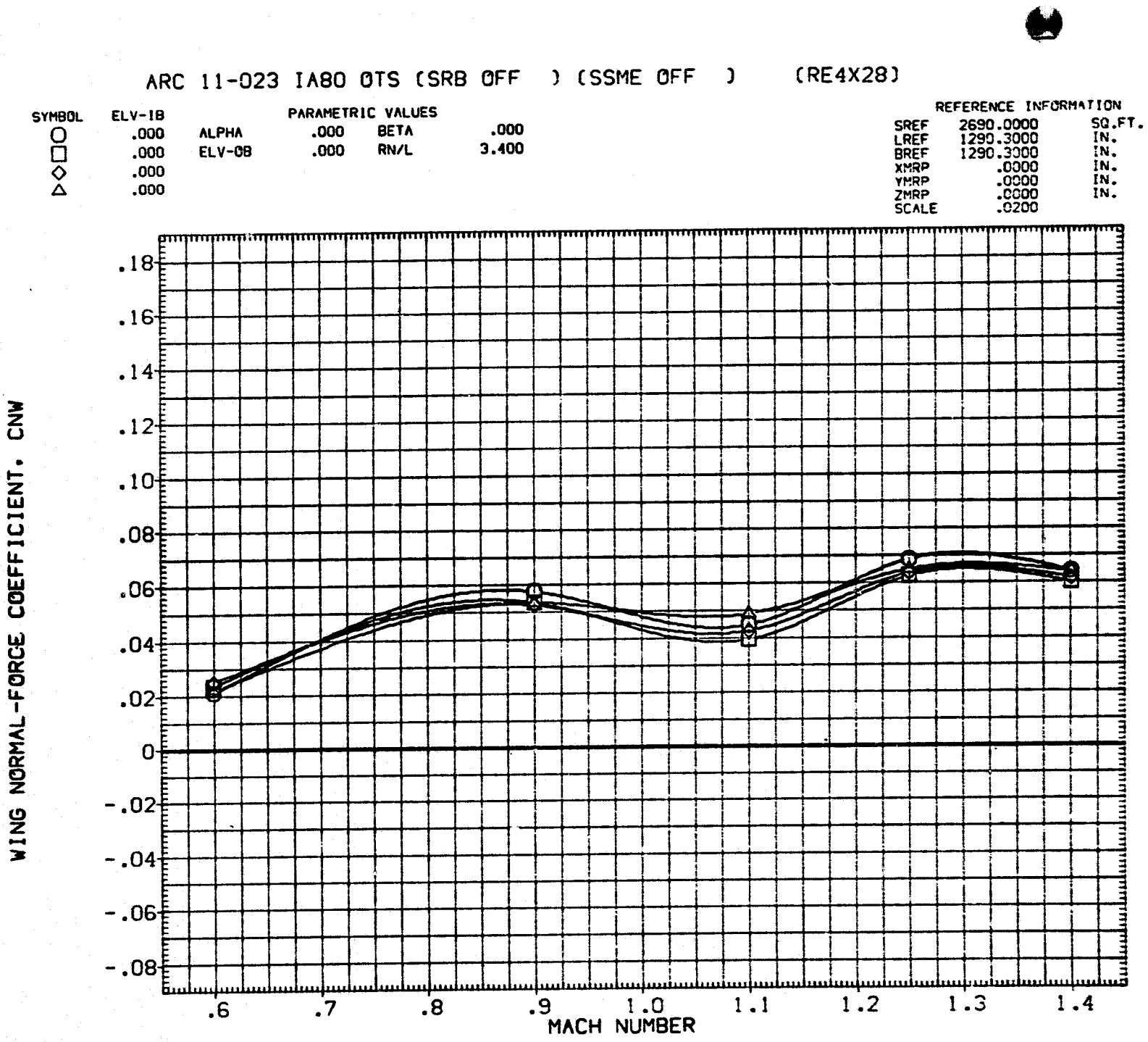



FIG. 118 EFFECT 0F SSME PLUME SIZE 0N WING L0ADS

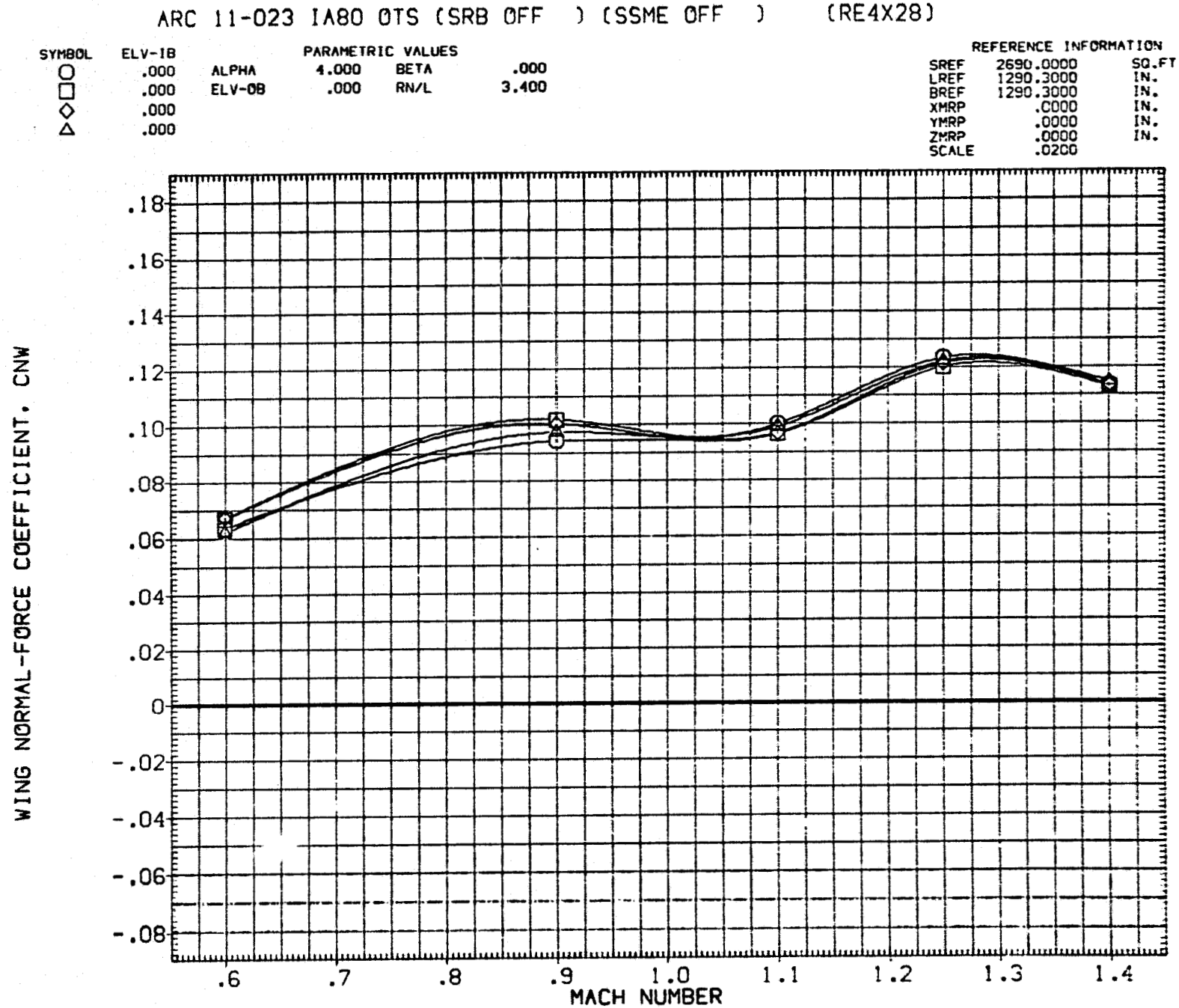



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

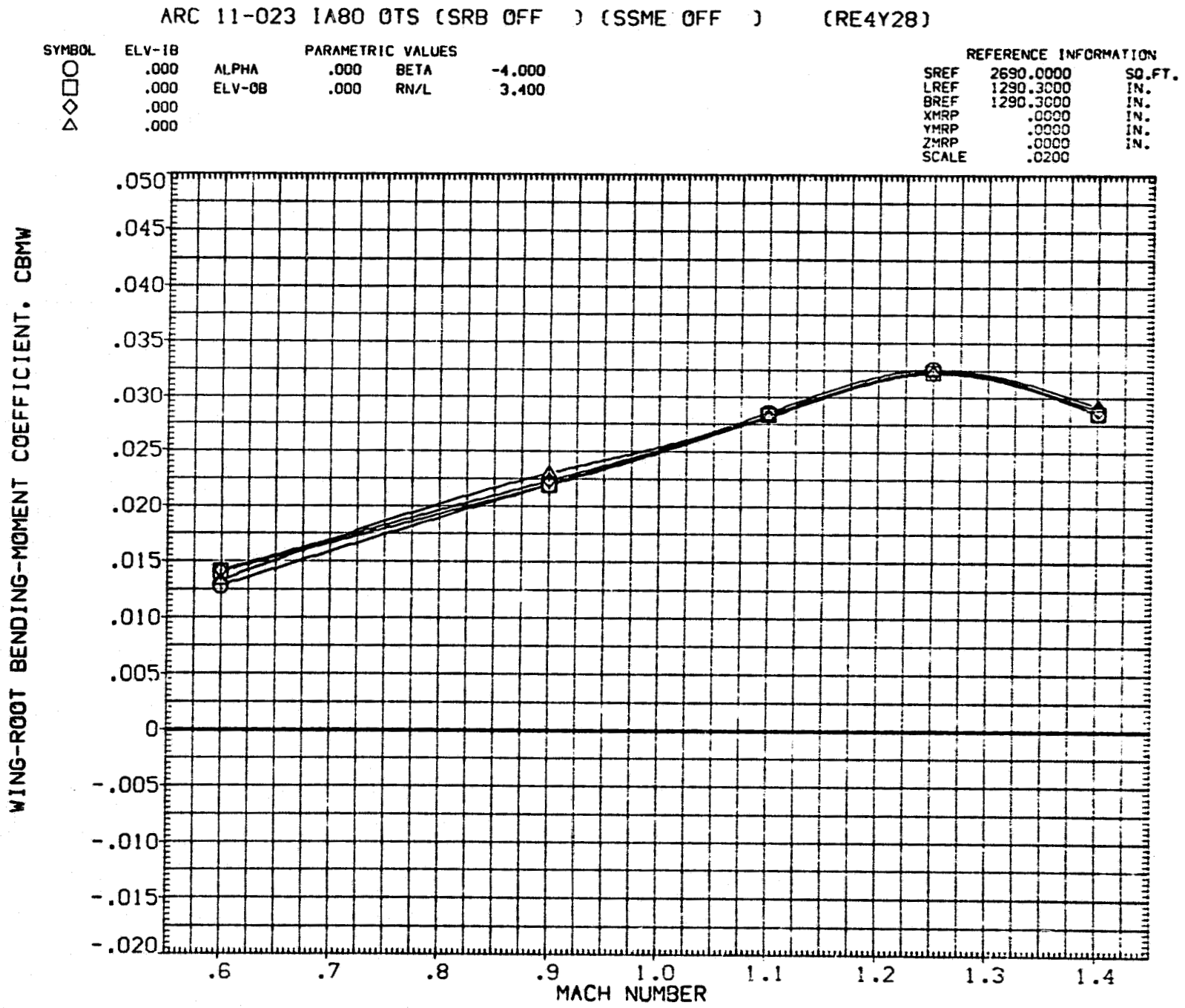



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

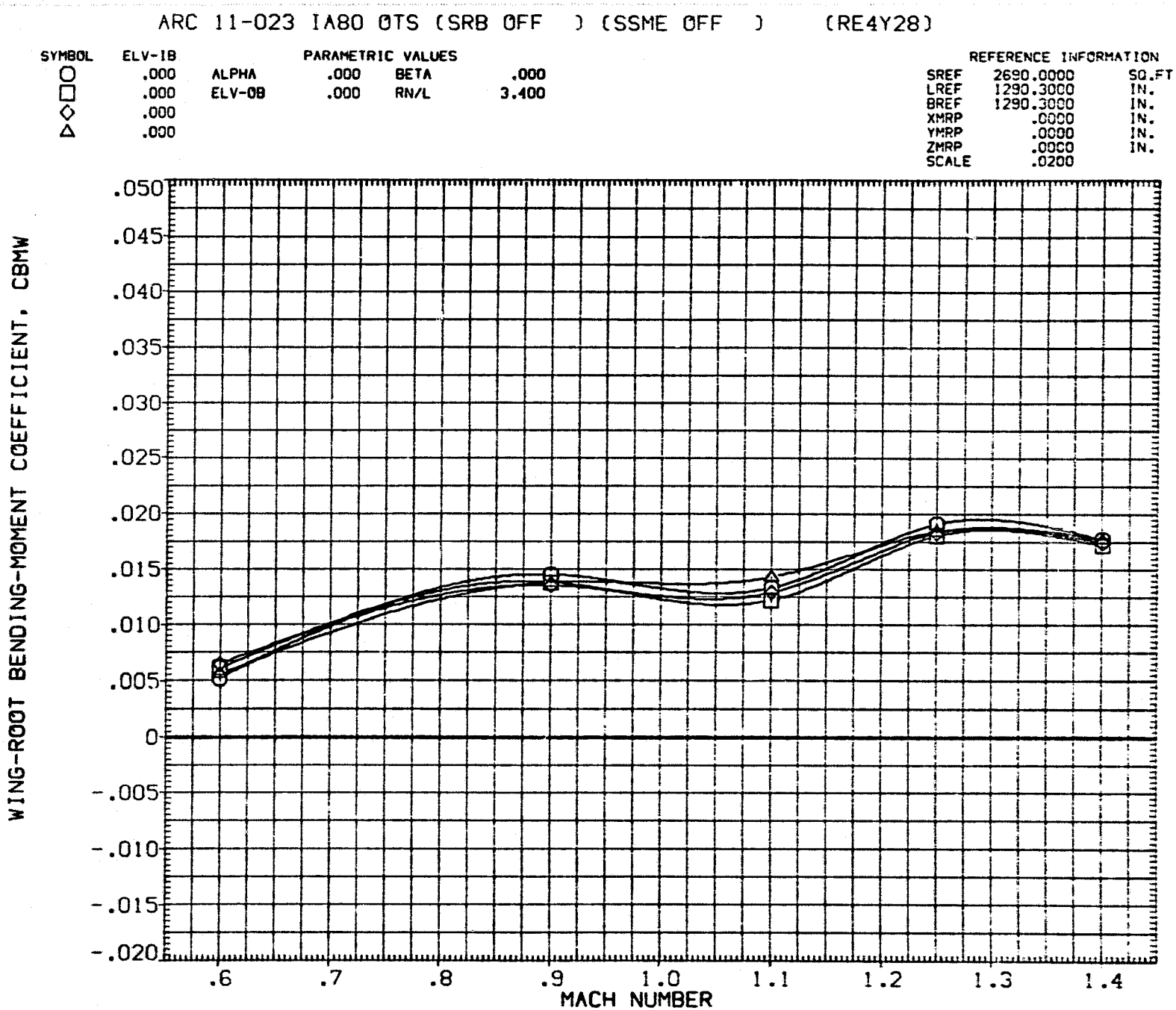



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

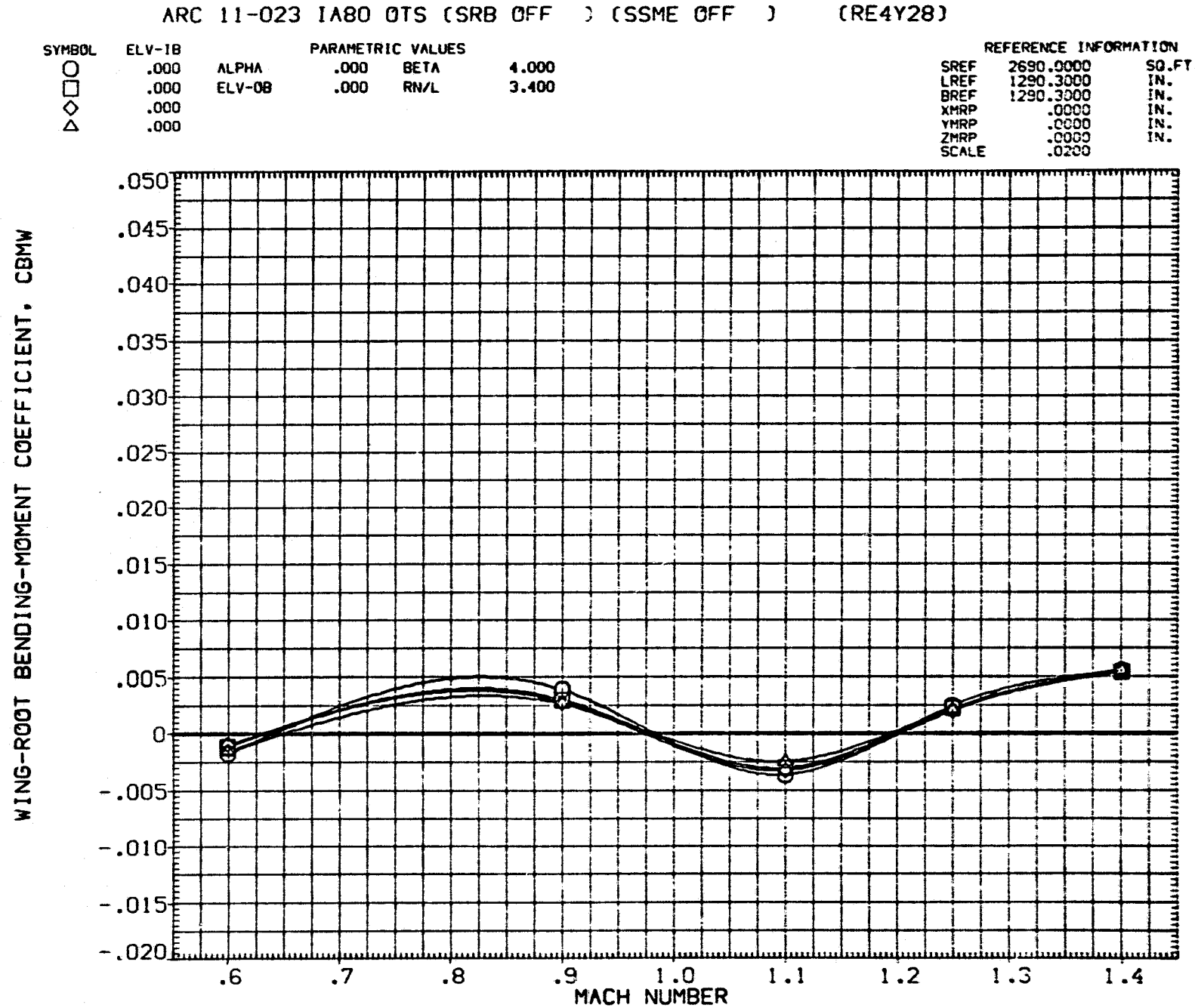



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

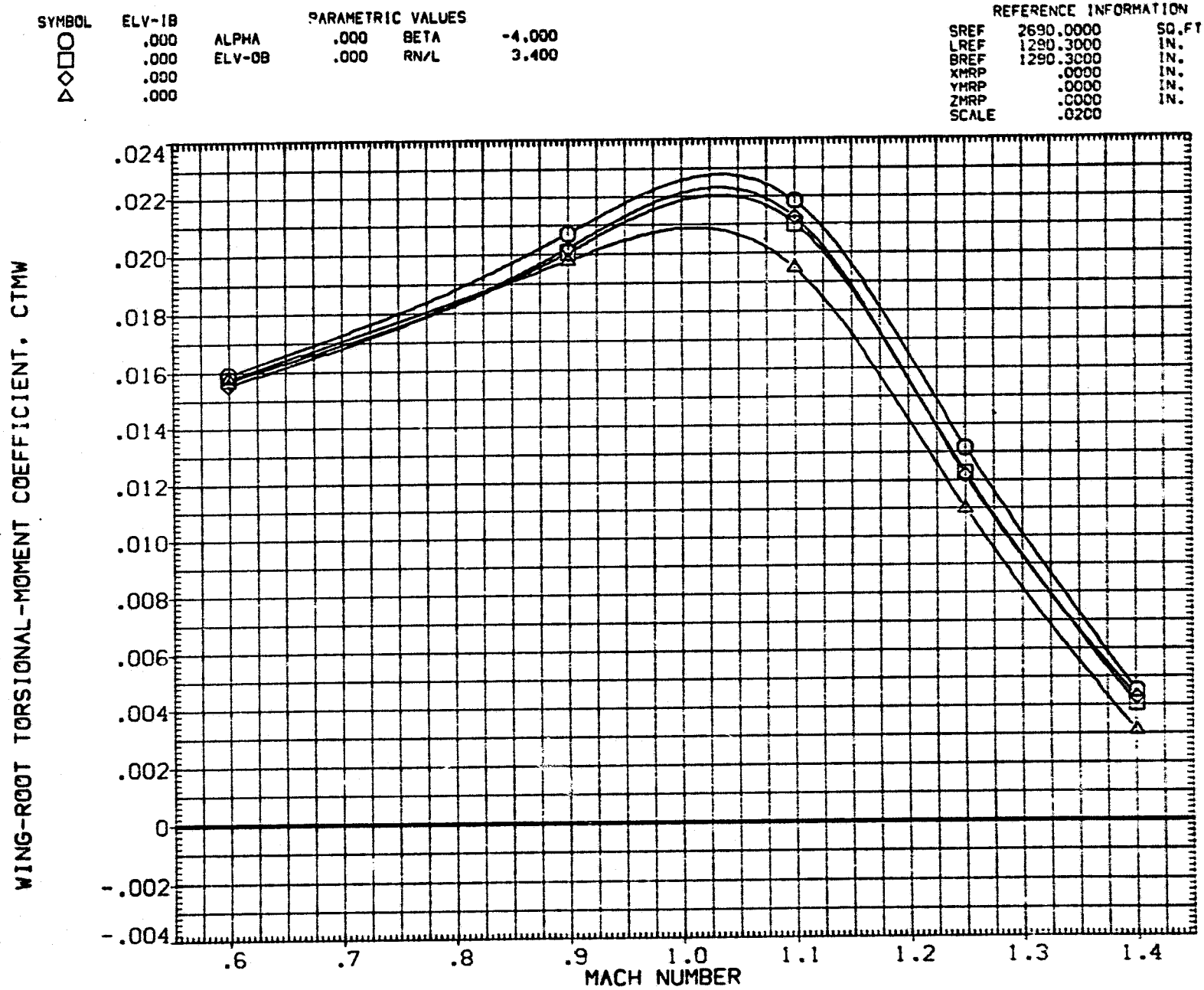



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

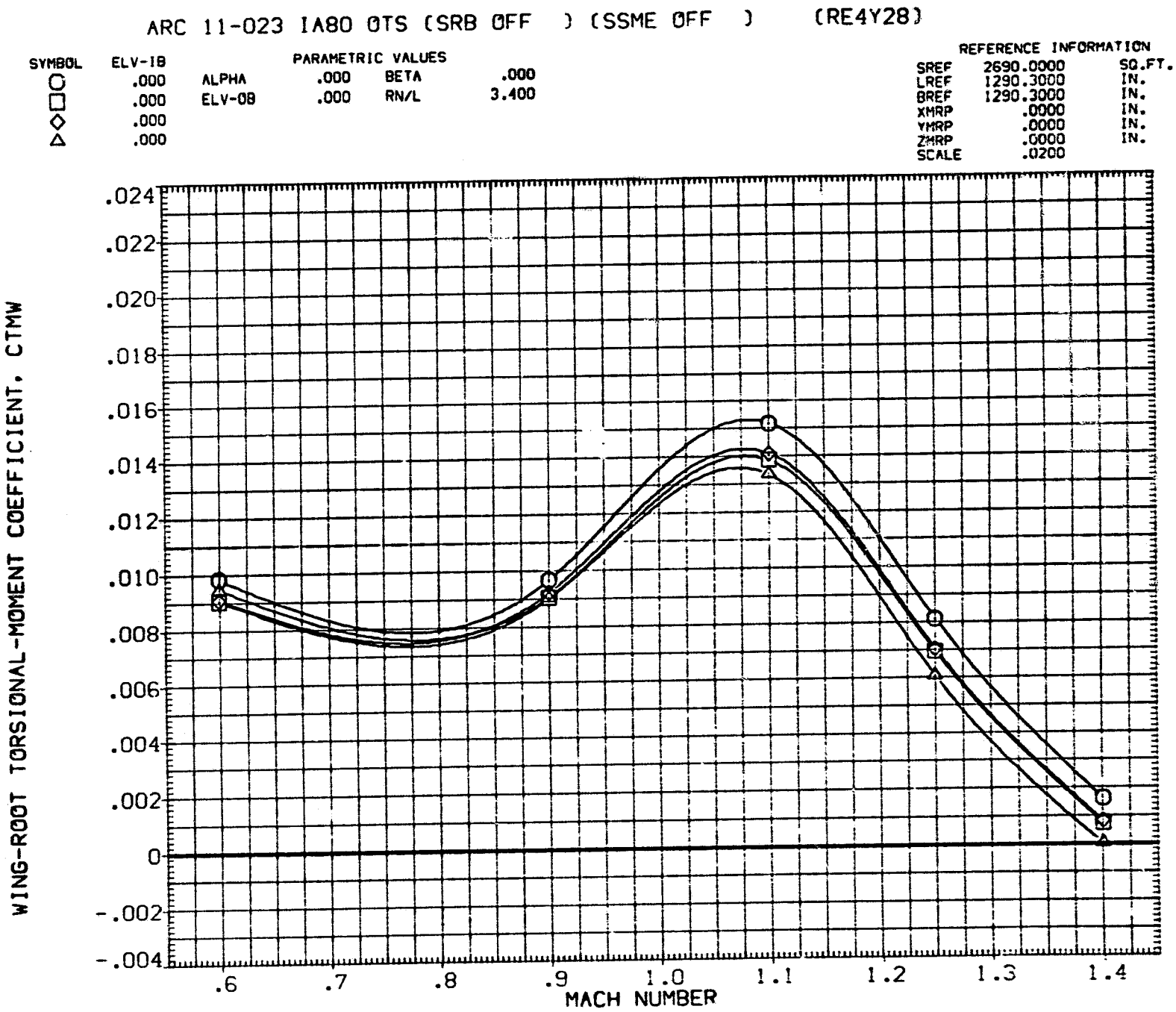



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

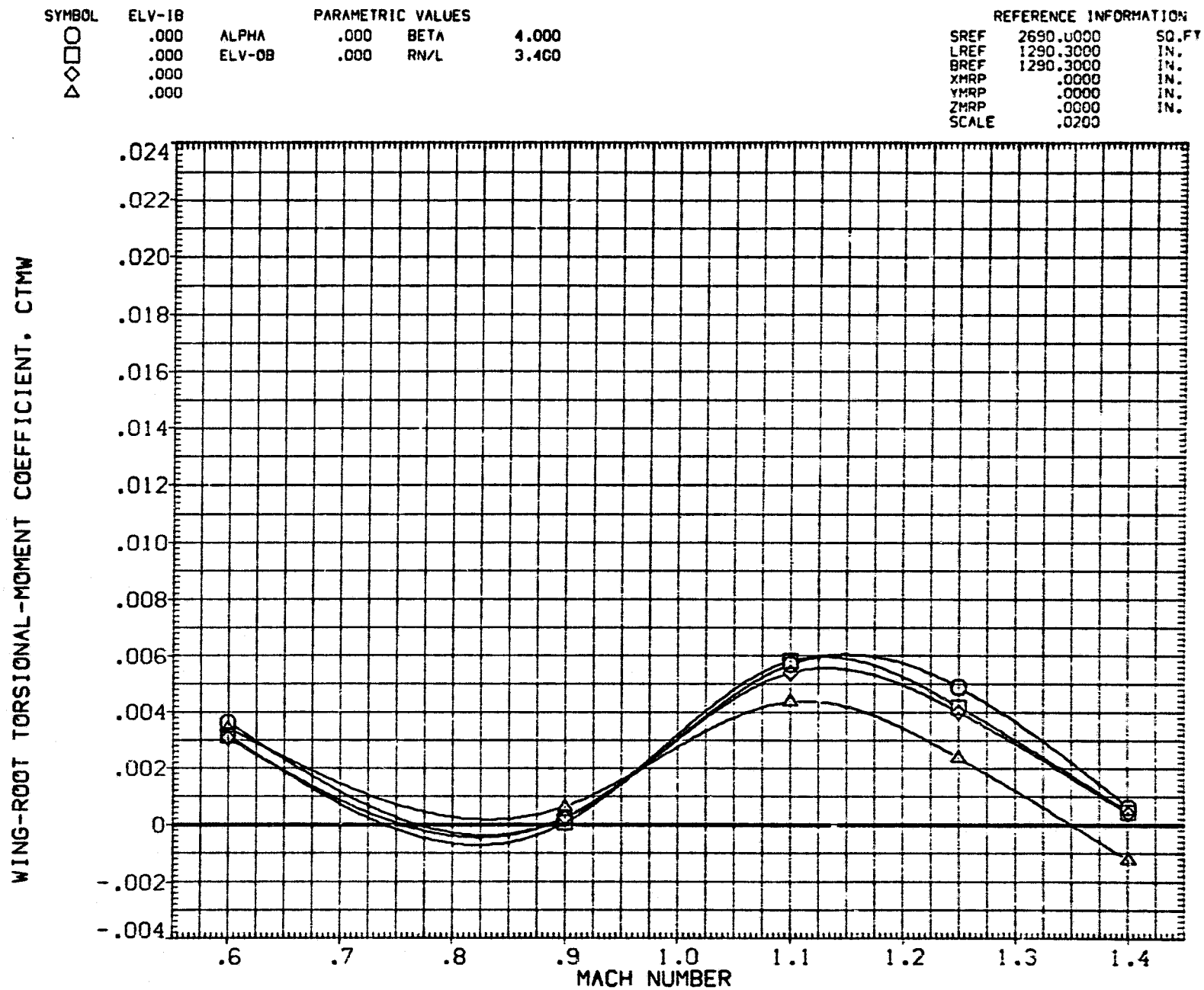



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 IA80 0TS (SRB 0FF ) (SSME 0FF ) (RE4Y28)

| SYMBOL | ELV-18 | | PARAMETRIC VALUES | | |
|---|---|---|---|---|---|
| ○ | .000 | ALPHA | .000 | BETA | -4.000 |
| □ | .000 | ELV-0B | .000 | RN/L | 3.400 |
| ◇ | .000 | | | | |
| △ | .000 | | | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

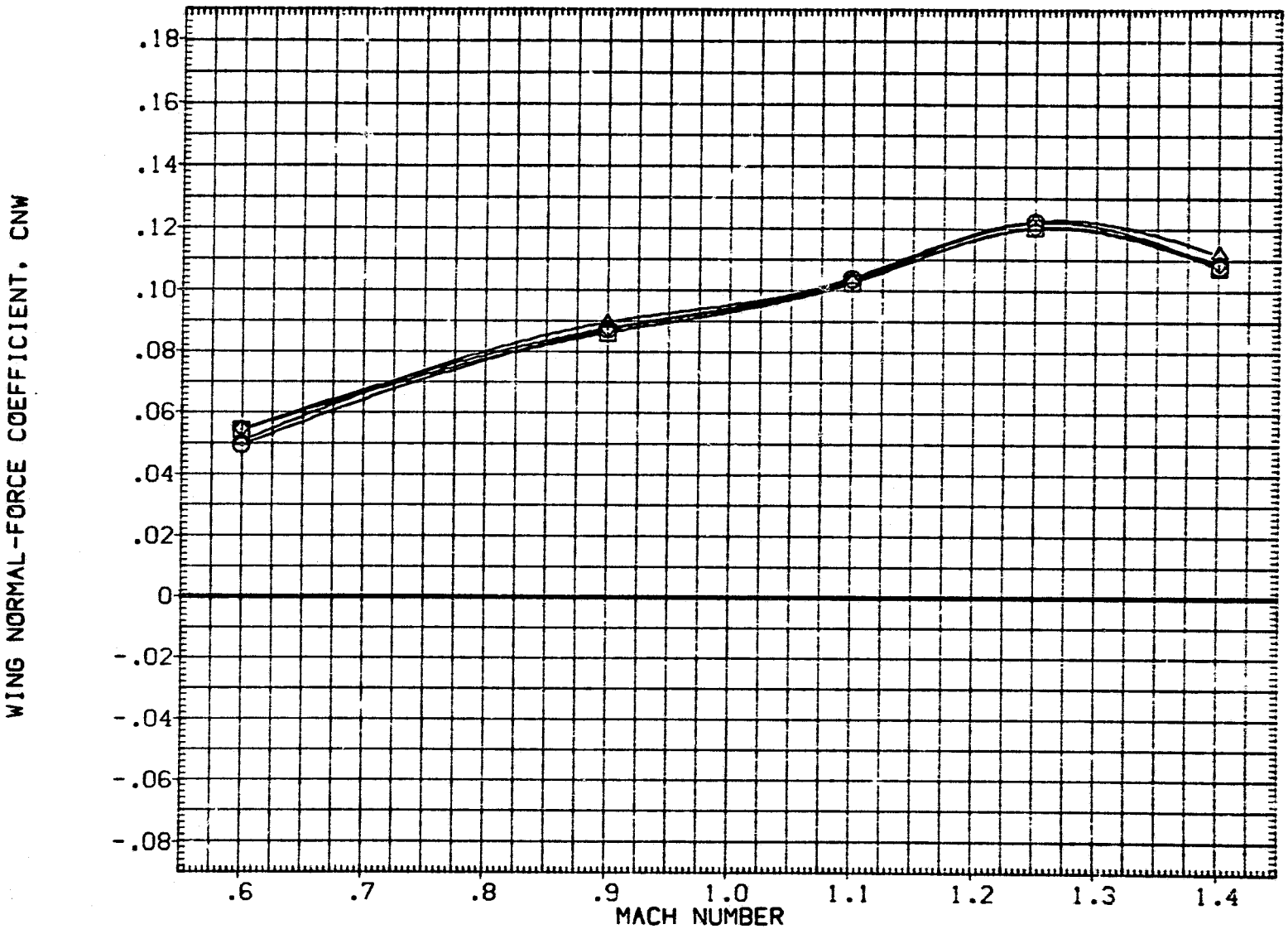



FIG. 118 EFFECT 0F SSME PLUME SIZE 0N WING L0ADS

ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) (RE4Y28)

| SYMBOL | ELV-IB |
|---|---|
| ○ | .000 |
| □ | .000 |
| ◇ | .000 |
| △ | .000 |

PARAMETRIC VALUES

| | | | |
|---|---|---|---|
| ALPHA | .000 | BETA | .000 |
| ELV-OB | .000 | RN/L | 3.400 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

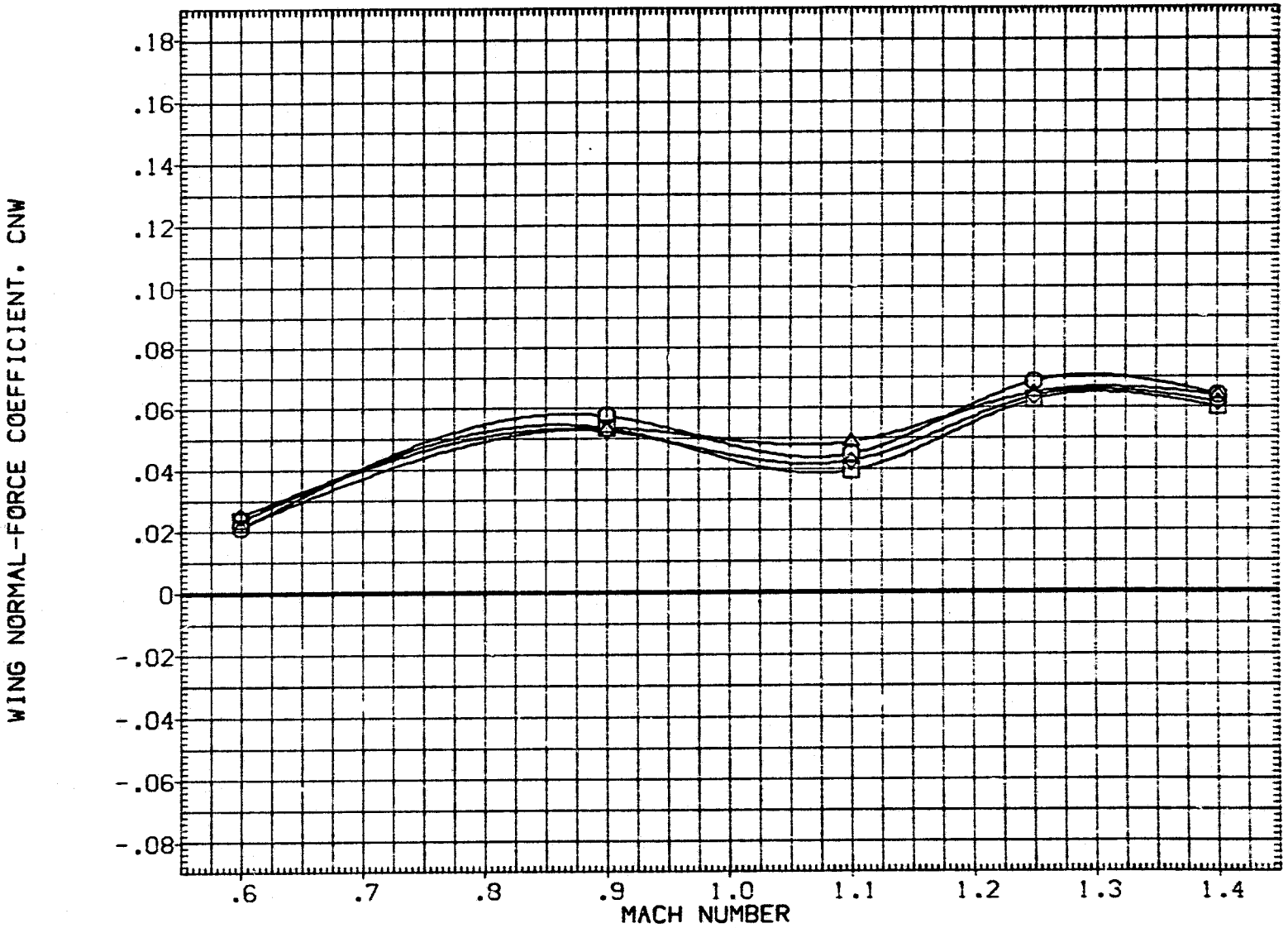



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) (RE4Y28)

| SYMBOL | ELV-IB |
|---|---|
| ○ | .000 |
| □ | .000 |
| ◇ | .000 |
| △ | .000 |

PARAMETRIC VALUES

| | | | | |
|---|---|---|---|---|
| ALPHA | .000 | BETA | 4.000 |
| ELV-OB | .000 | RN/L | 3.400 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

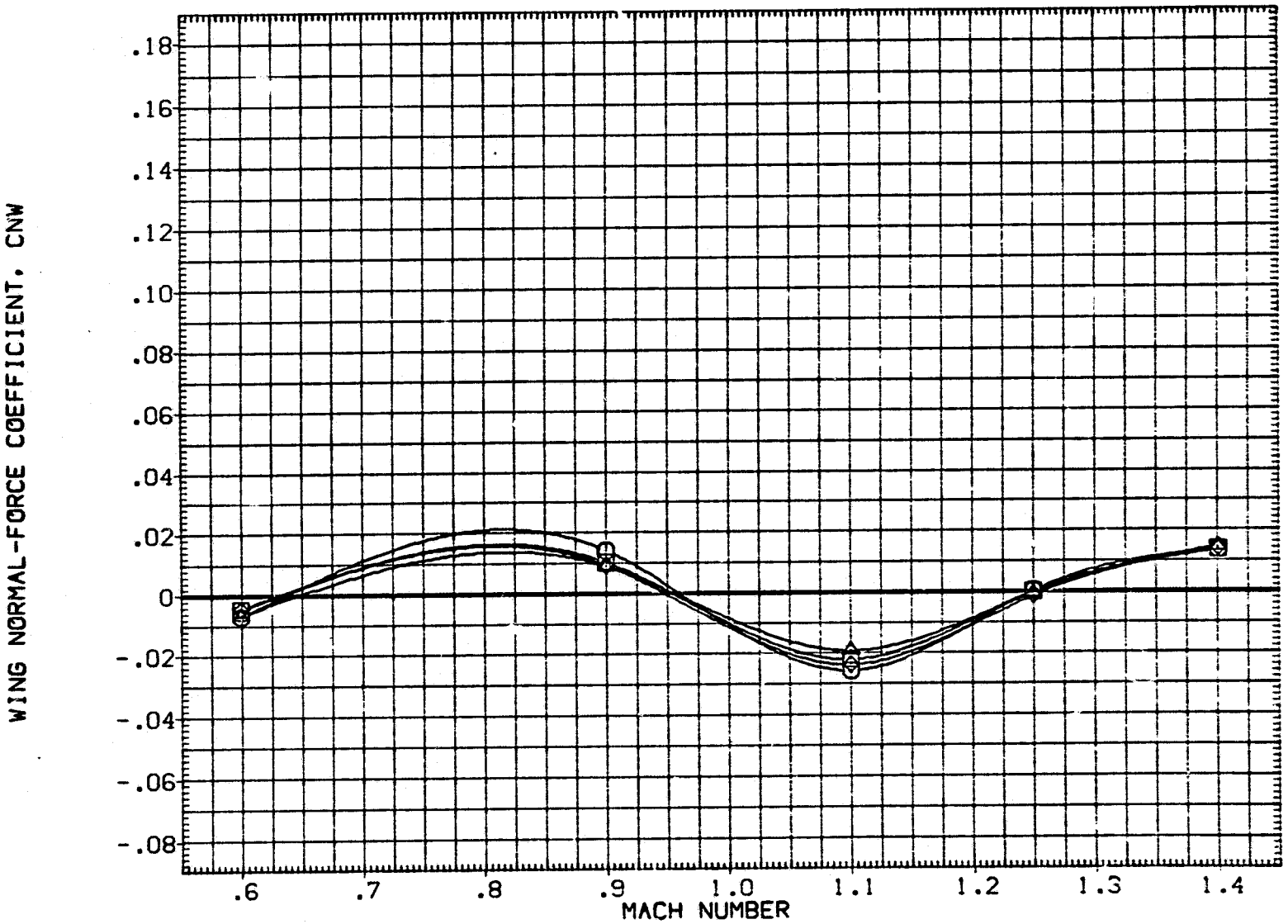



FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

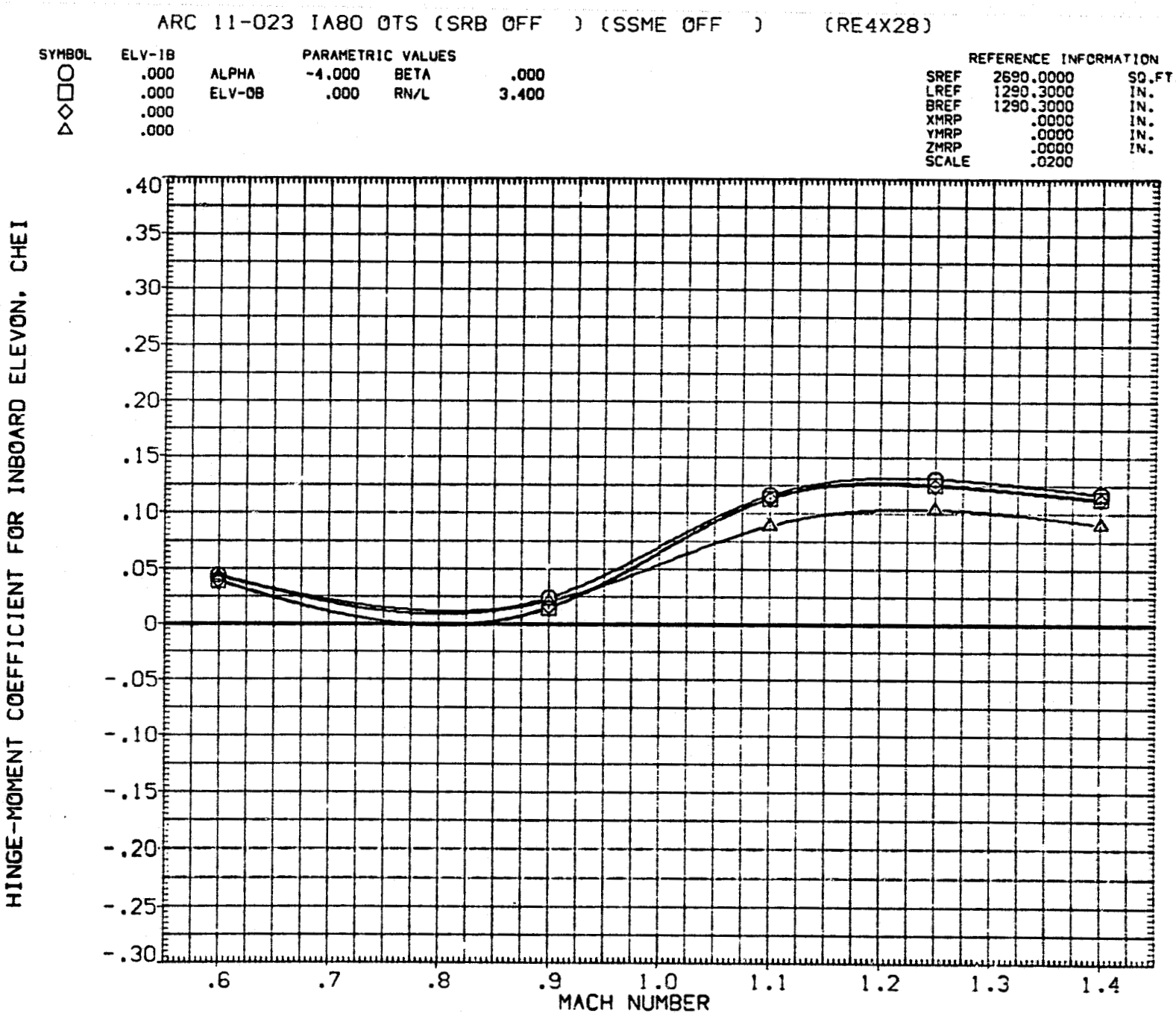



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

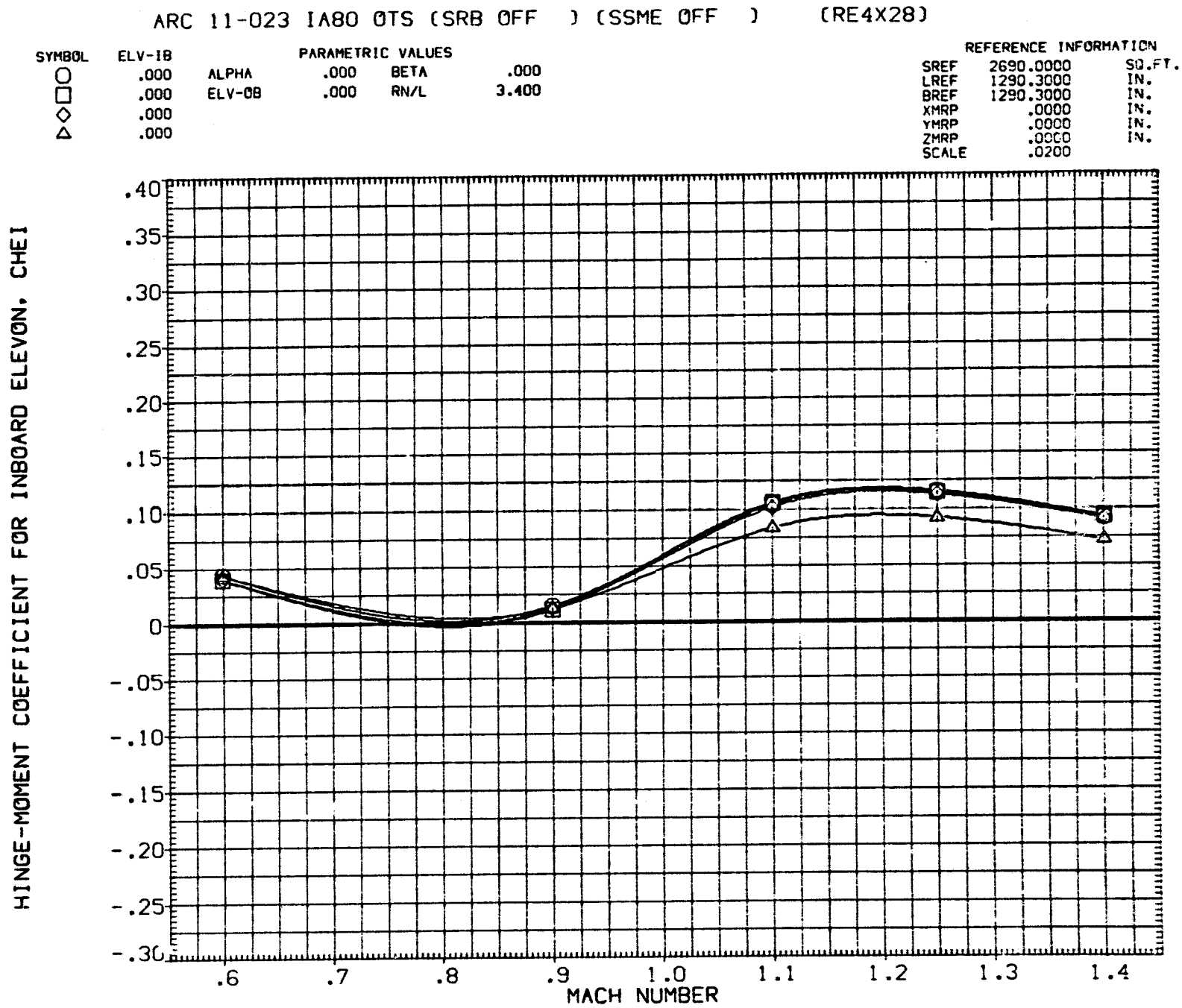



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

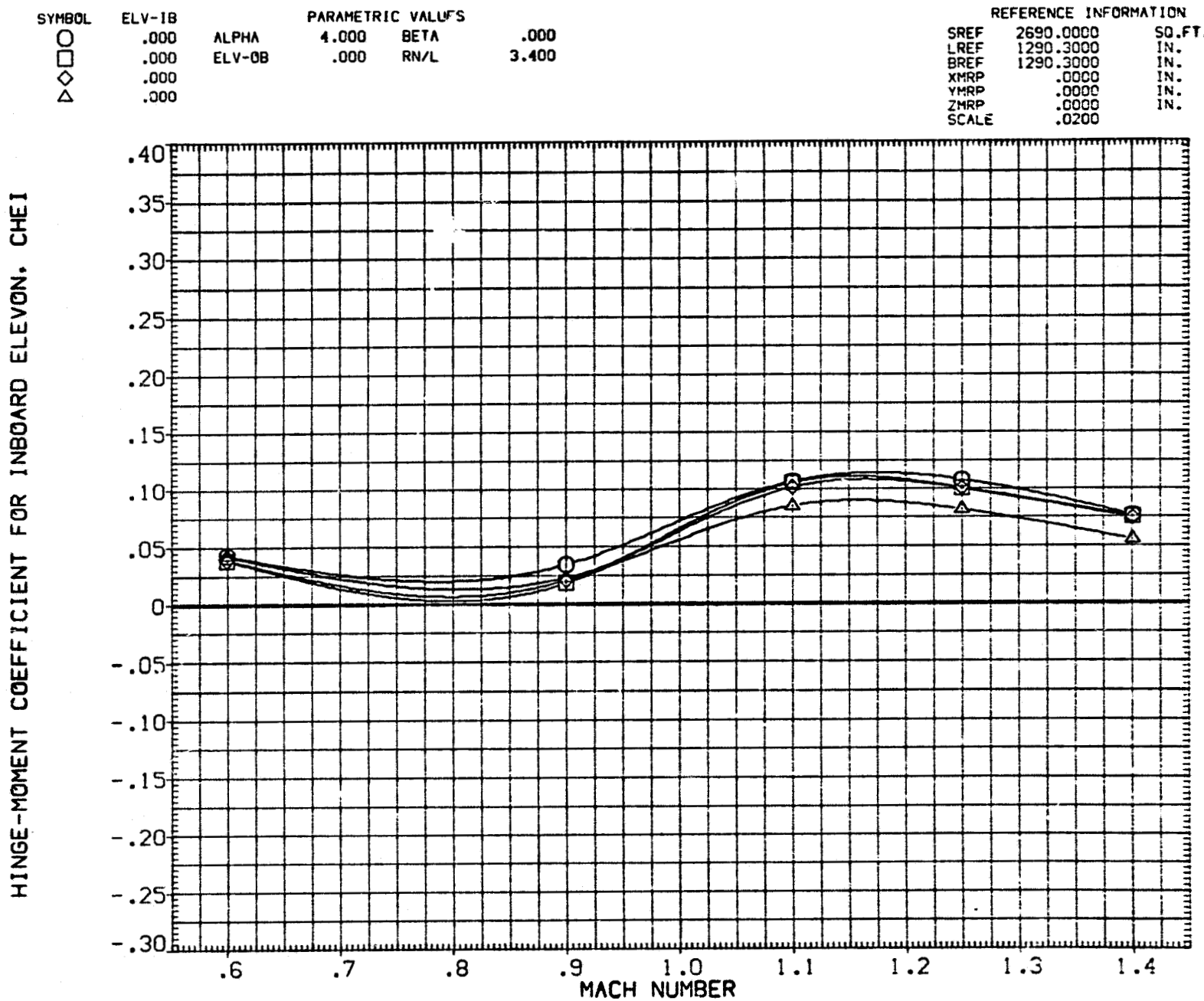



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

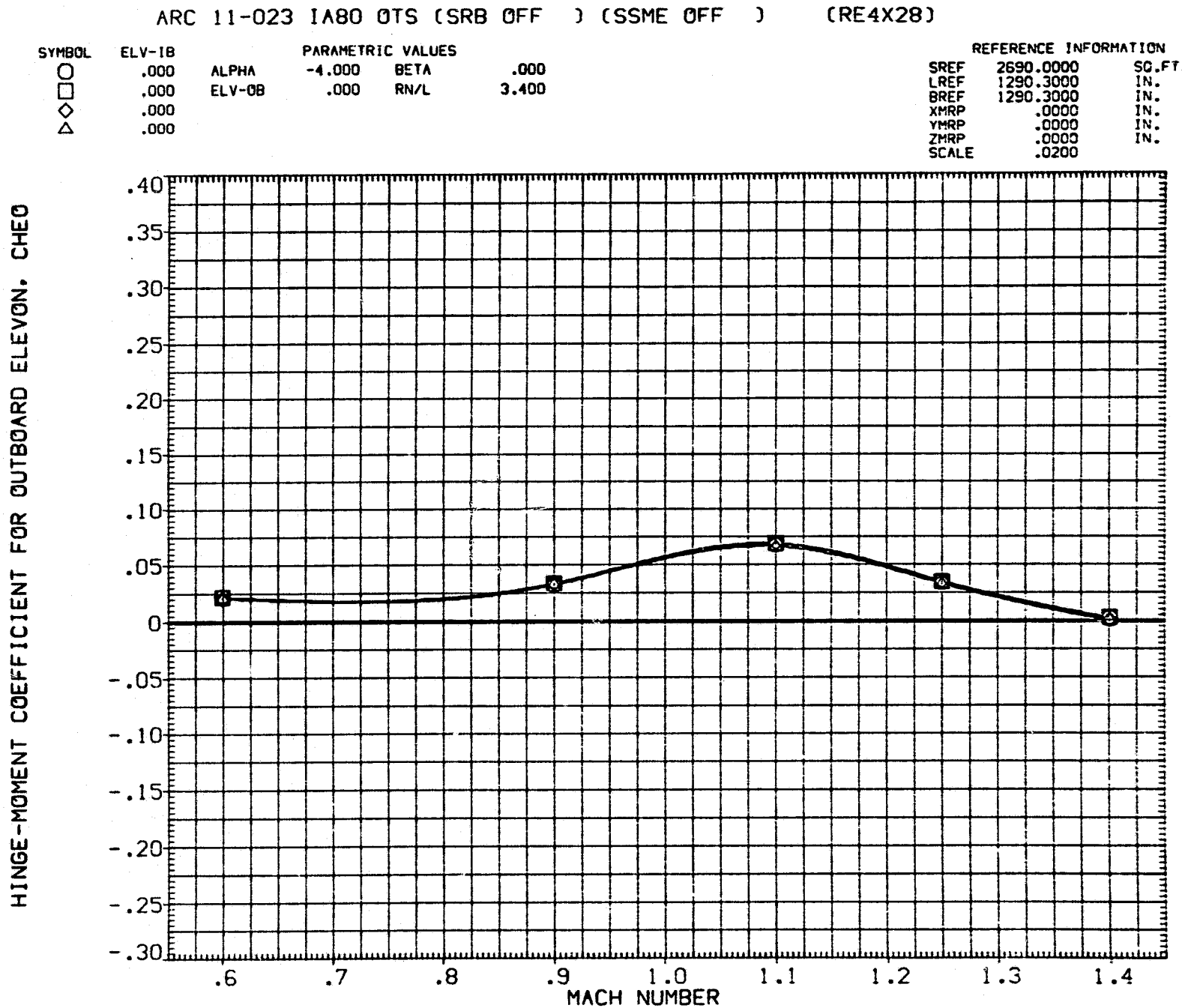



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

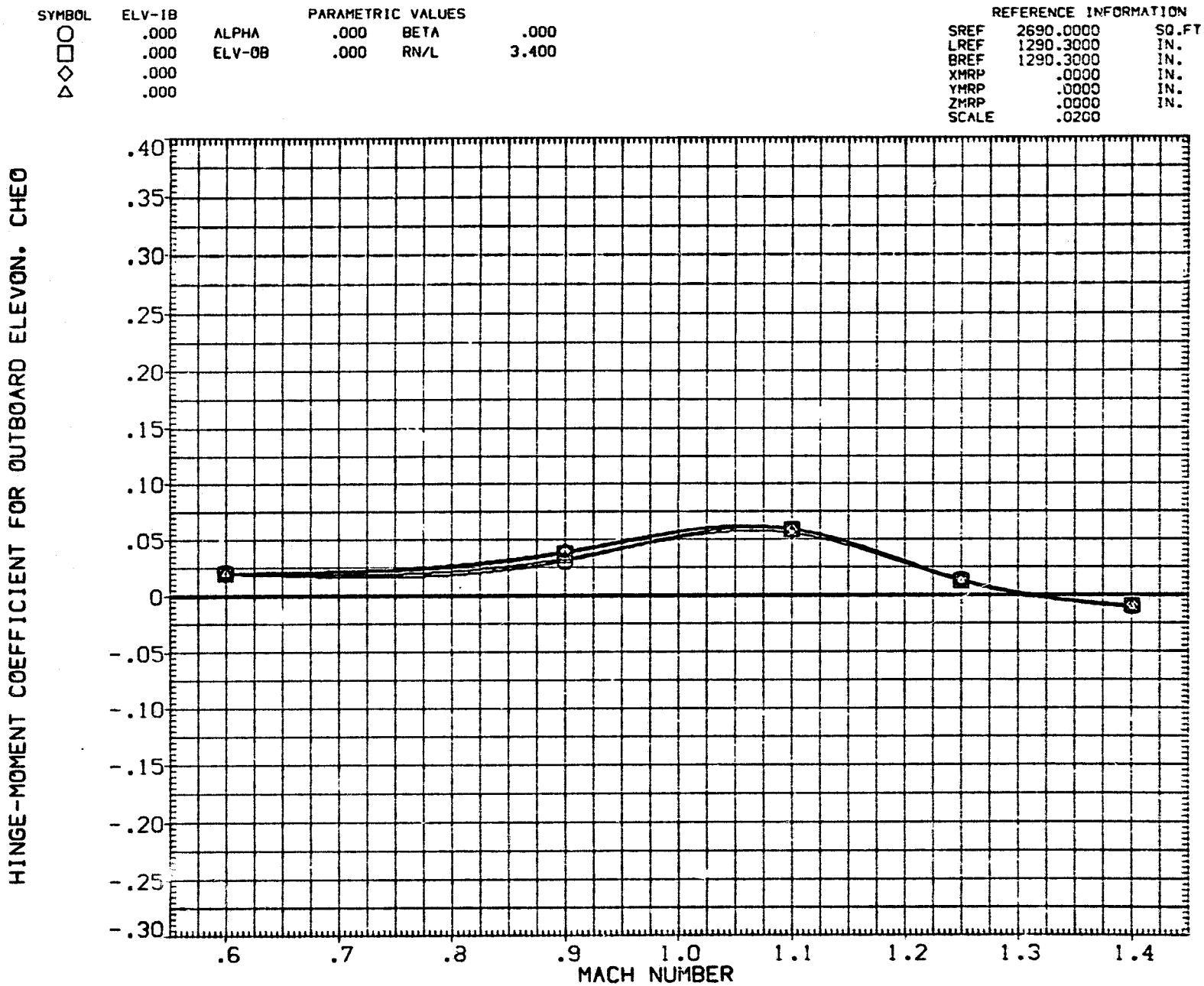



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

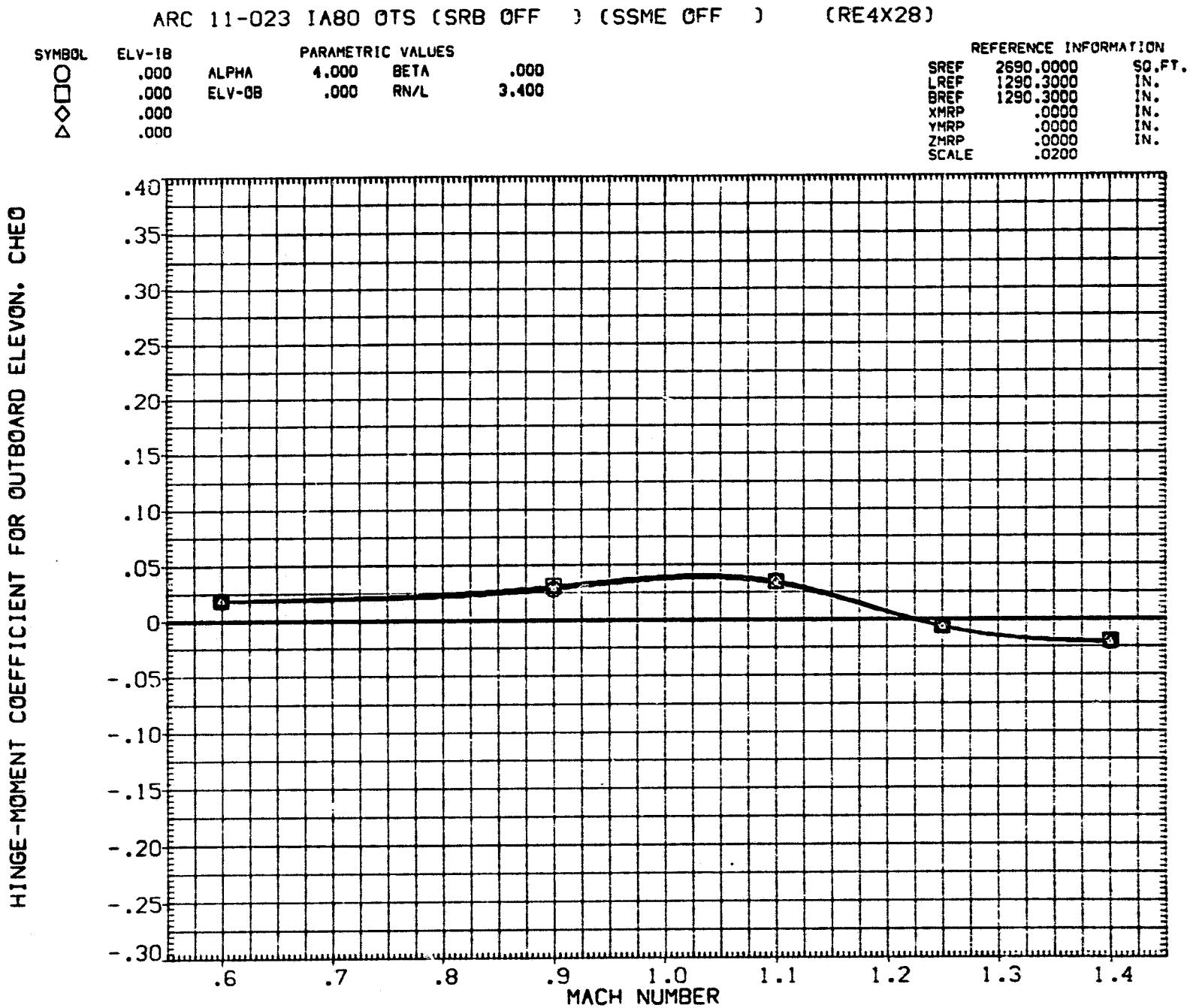



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) (RE4Y28)

| SYMBOL | ELV-IB | PARAMETRIC VALUES | | | |
|---|---|---|---|---|---|
| ○ | .000 | ALPHA | .000 | BETA | -4.000 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 |
| ◇ | .000 | | | | |
| △ | .000 | | | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

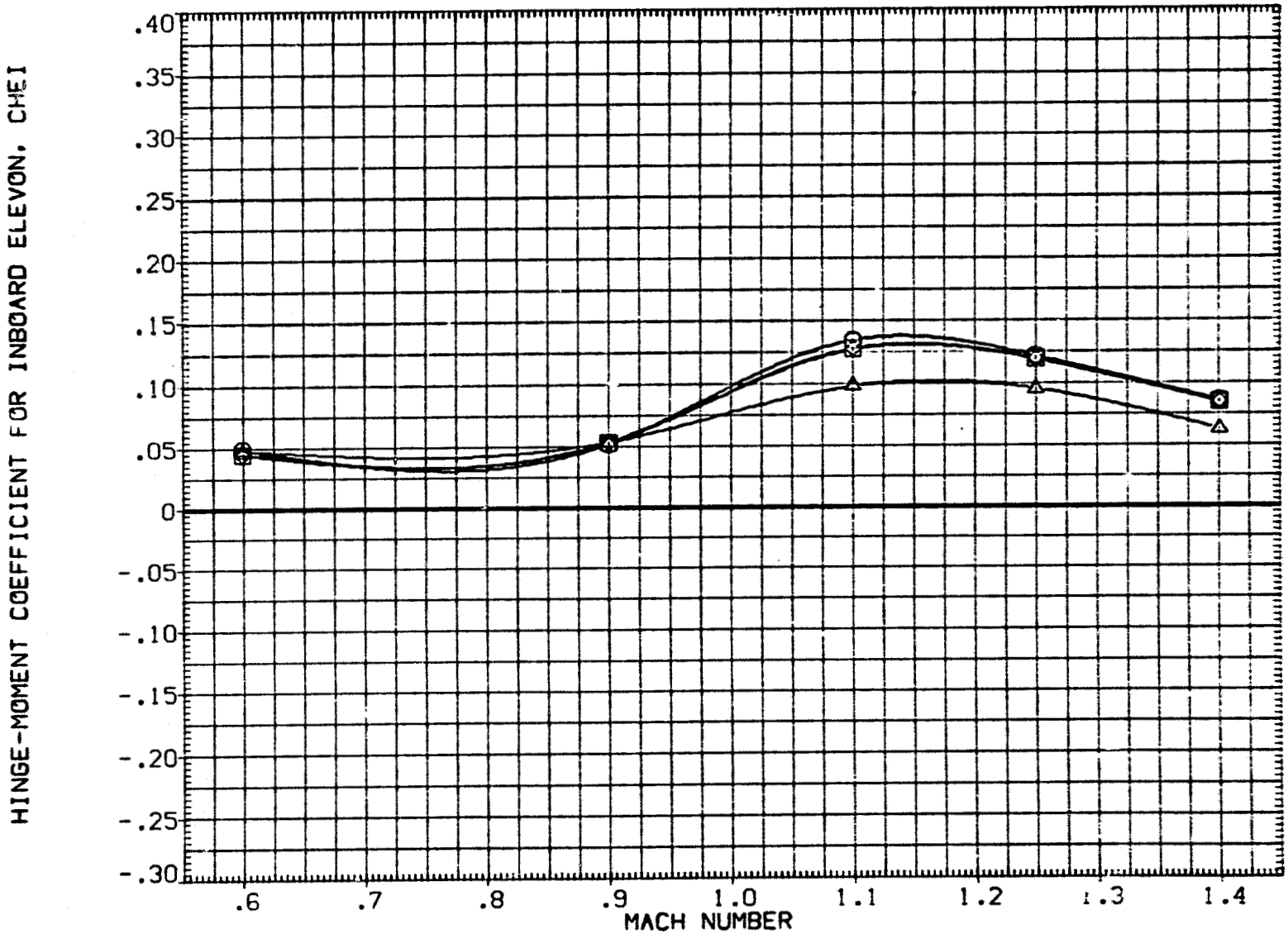



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

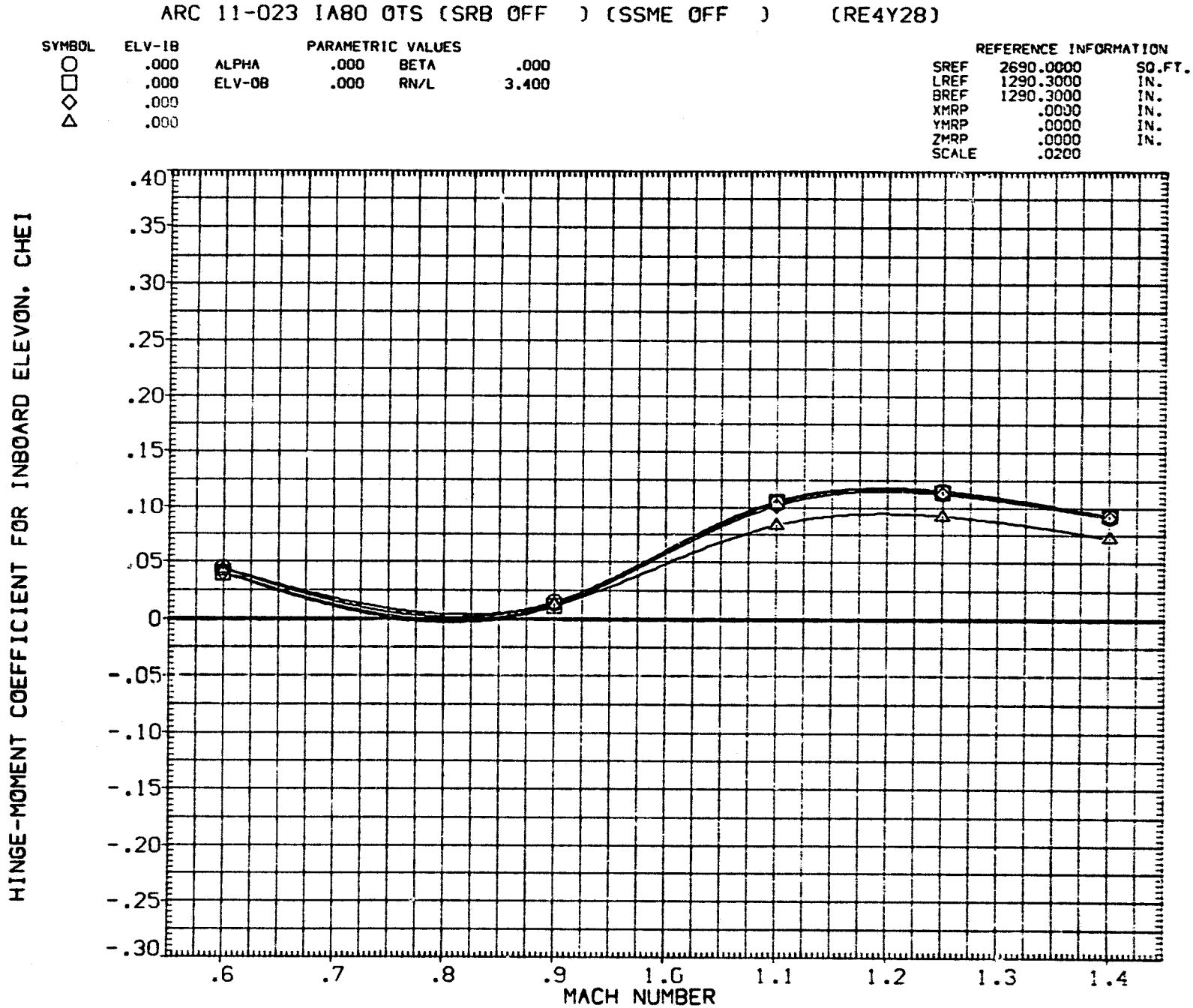



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

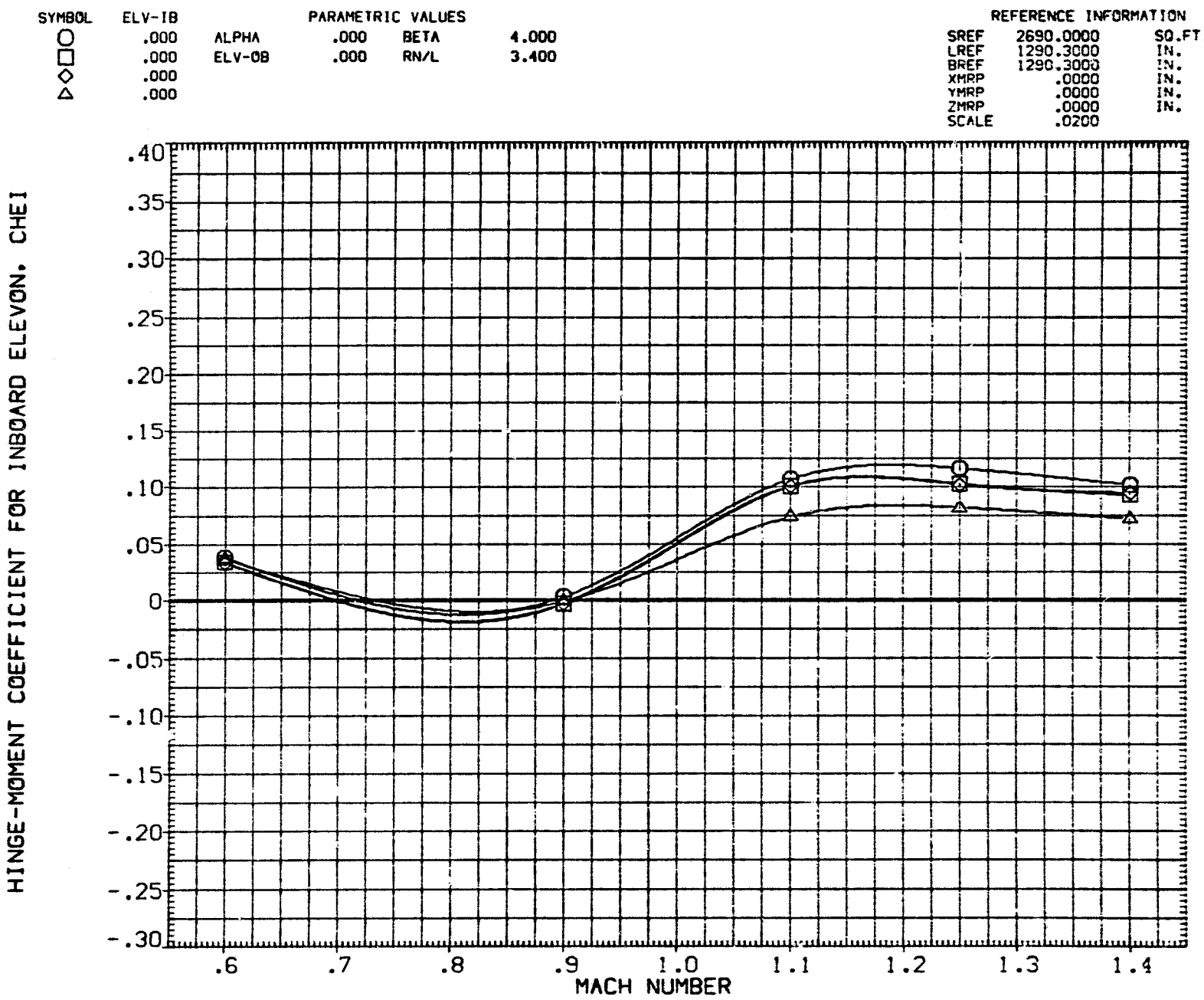



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

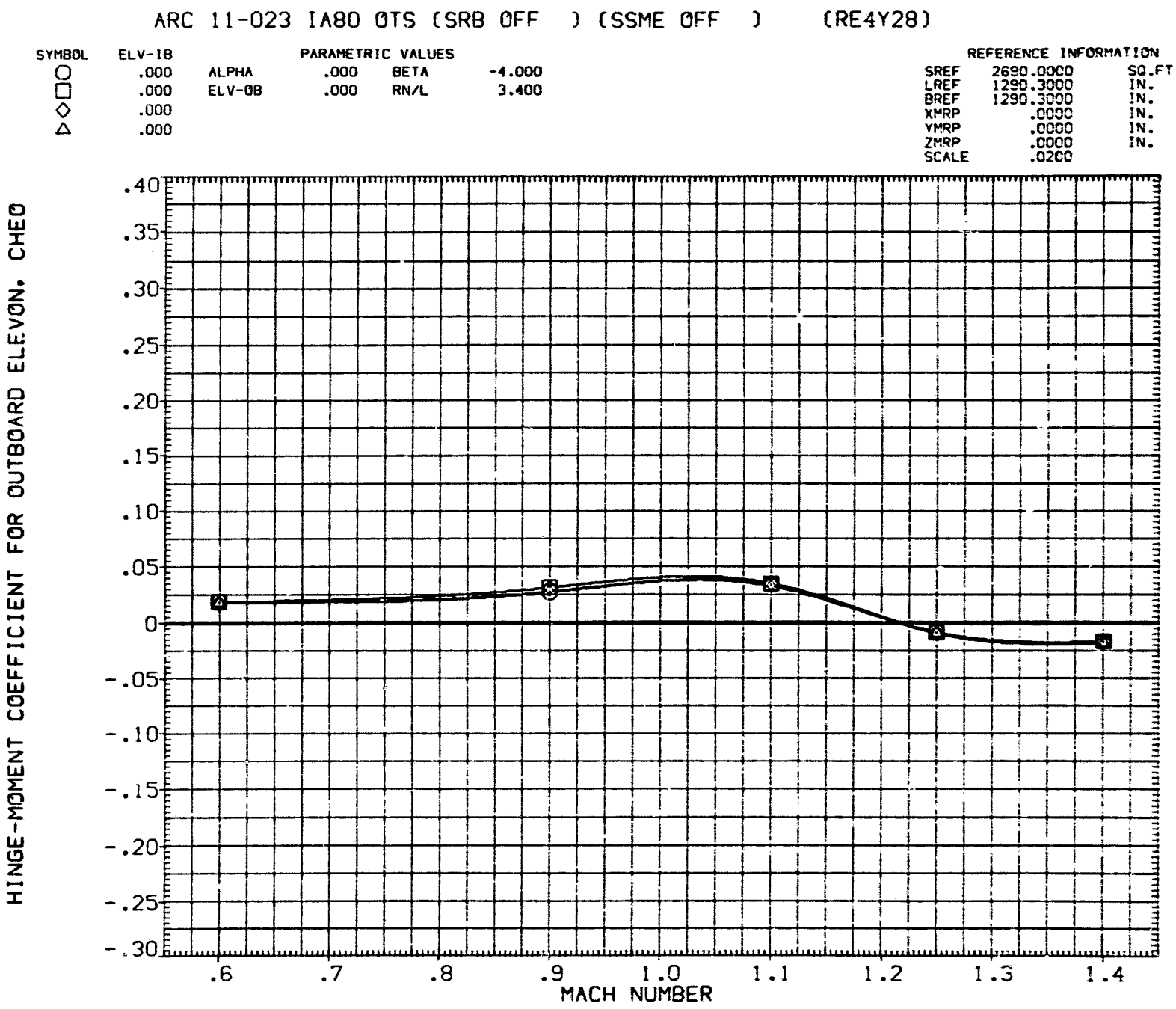



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

| SYMBOL | ELV-IB | PARAMETRIC VALUES | | | |
|---|---|---|---|---|---|
| ○ | .000 | ALPHA | .000 | BETA | .000 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 |
| ◇ | .000 | | | | |
| △ | .000 | | | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

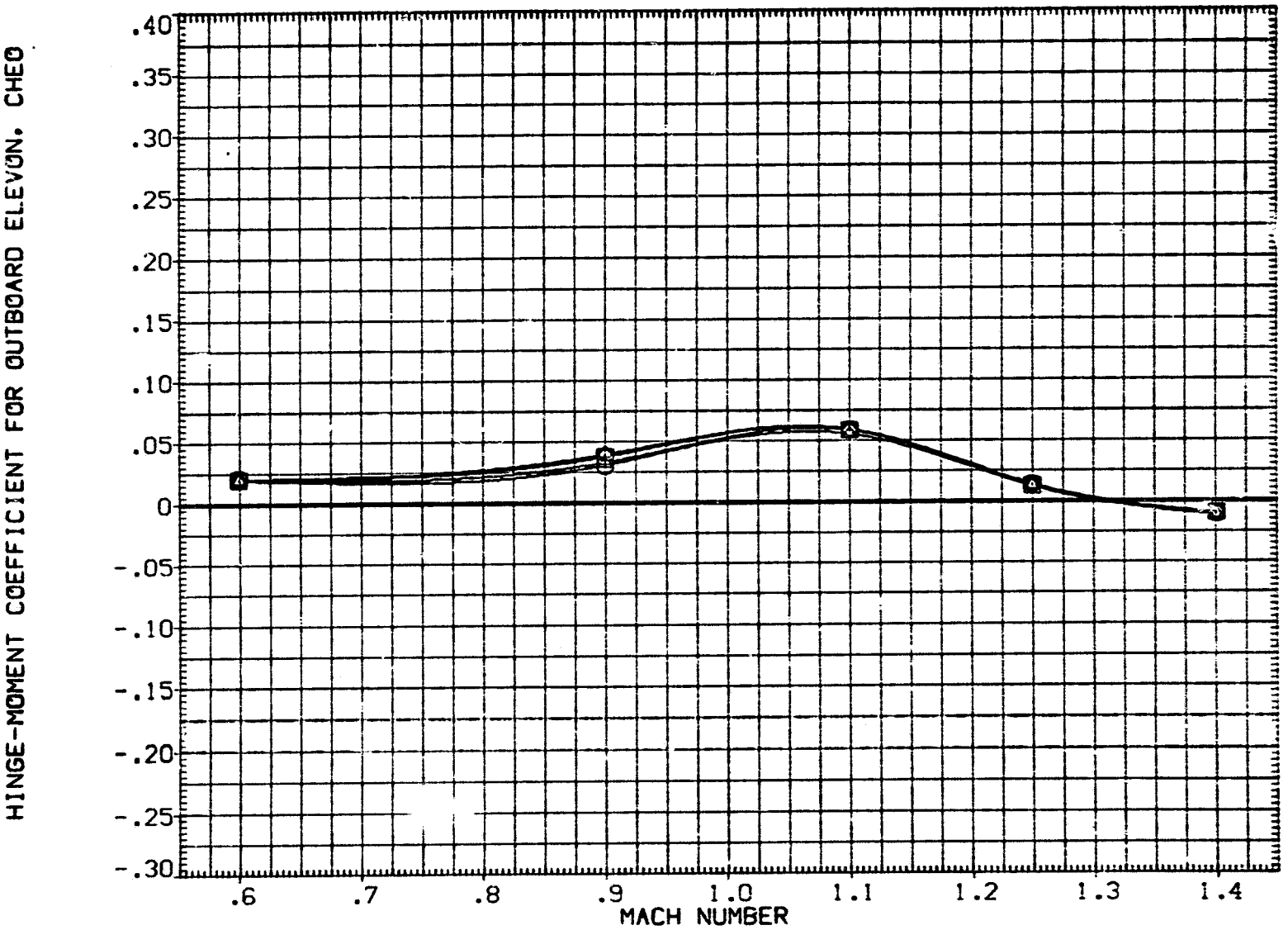



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

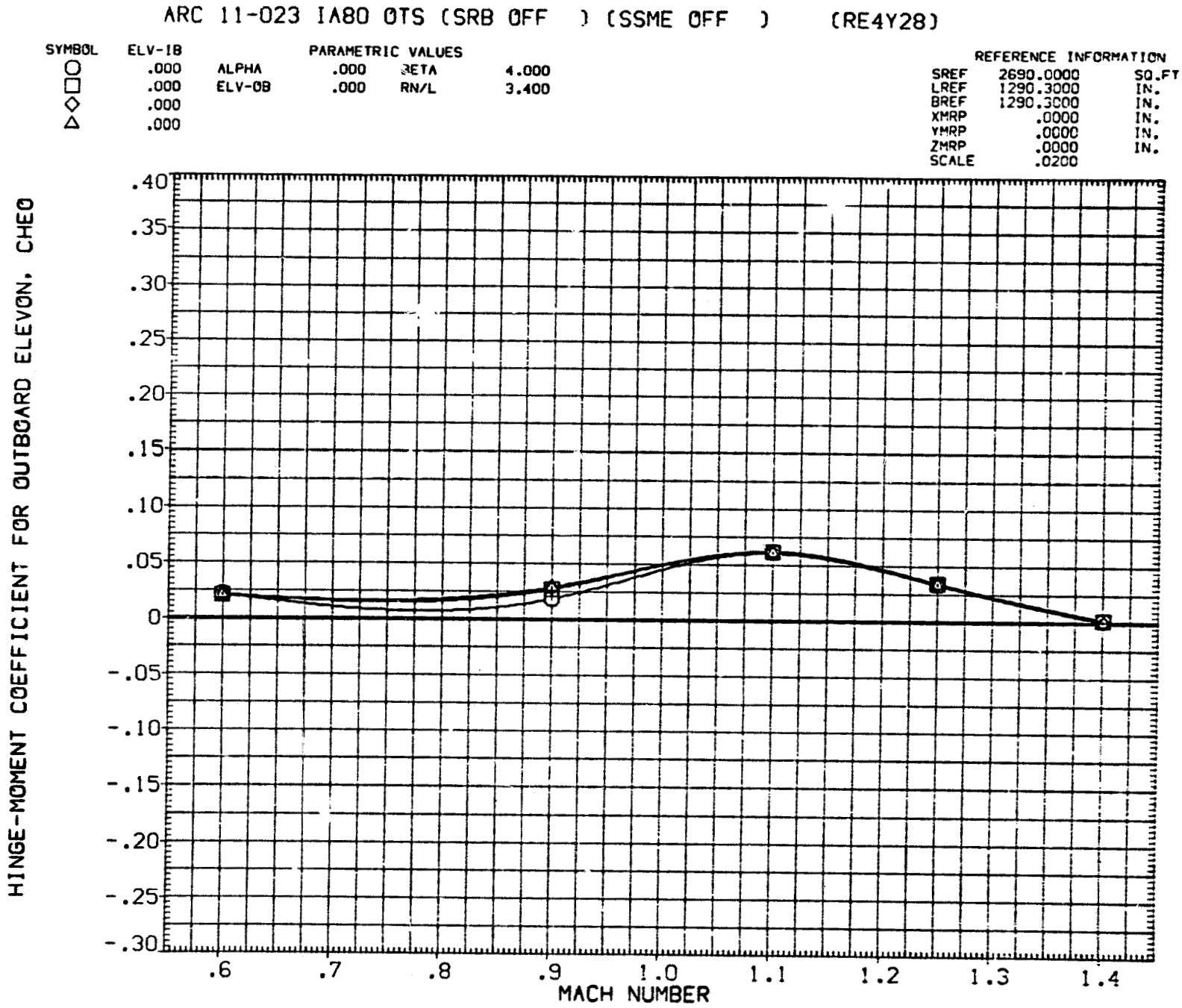



FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (EE4N20) | □ | ARC 11-023 IA6 [illegible]TS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (EE4N25) | ◇ | ARC 11-023 IA20 JTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | .000 |
| (EE4N06) | ◇ | ARC 11-023 I[illegible]TS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .000 |
| (EE4N01) | △ | ARC 11-023 [illegible]TS (SRB NOM++) (SSME NOM ) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

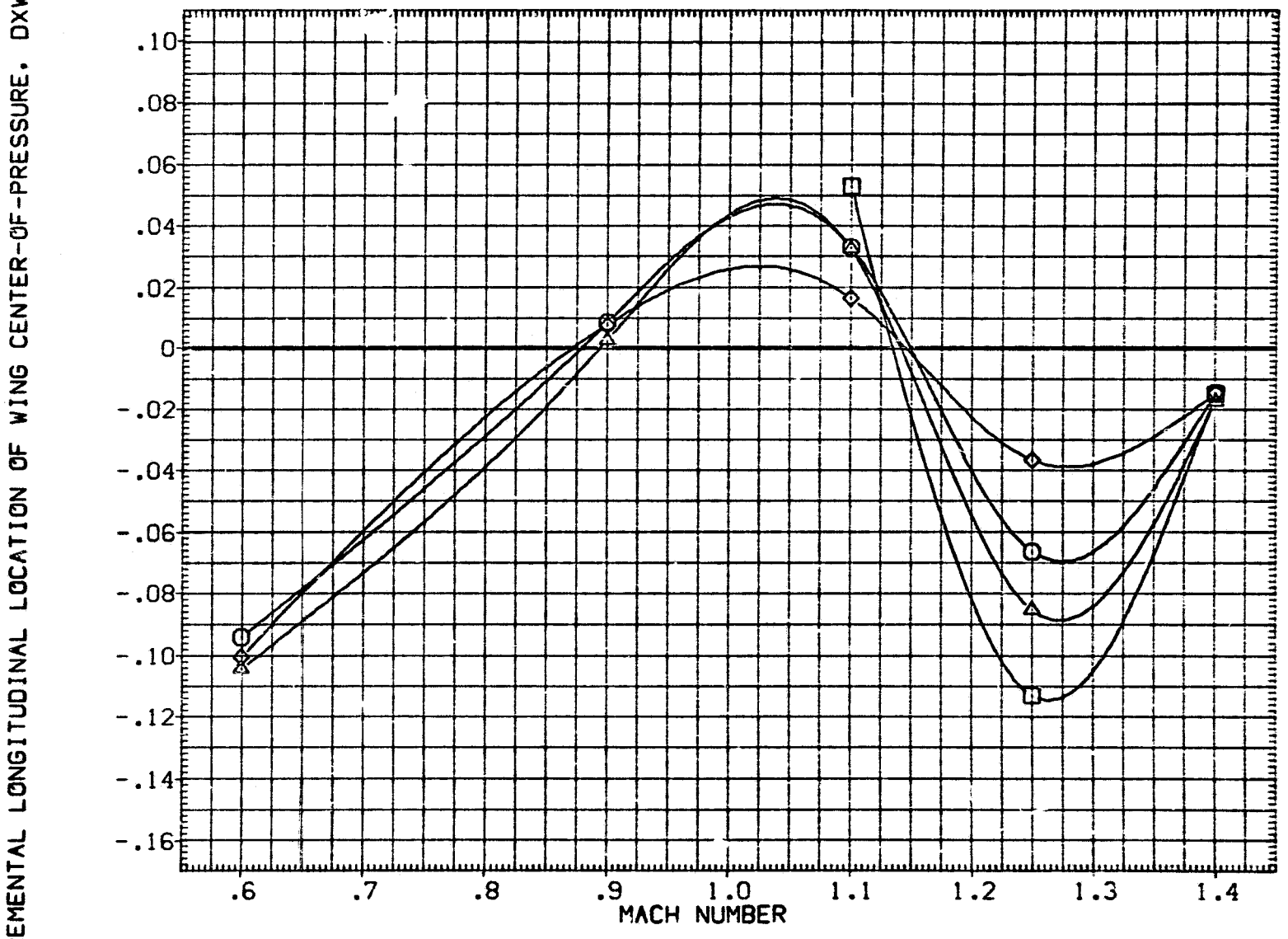



FIG. 120 SUMMARY, SRB PLUME EFFECTS ON WING CENTER OF PRESSURE

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (EE4N20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (EE4N25) | □ | ARC 11-023 IA80 OTS (SRB NOM- ) (SSME NOM ) | .000 | .000 | .000 |
| (EE4N06) | ◇ | ARC 11-023 IA80 OTS (SRB NOM+ ) (SSME NOM ) | .000 | .000 | .000 |
| (EE4N01) | △ | ARC 11-023 IA80 OTS (SRB NOM++) (SSME NOM ) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

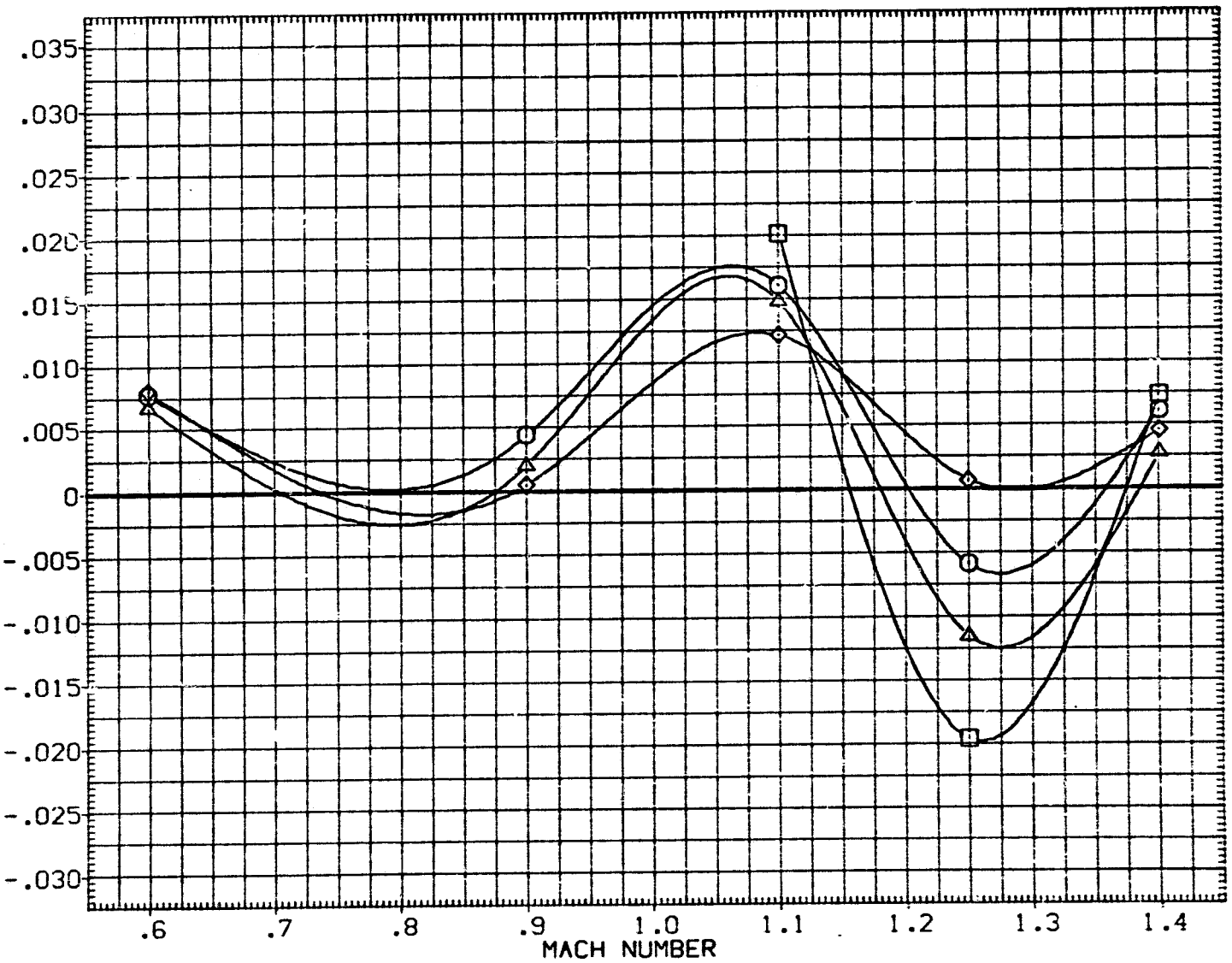



FIG. 120 SUMMARY, SRB PLUME EFFECTS ON WING CENTER OF PRESSURE

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (EE4N20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (EE4N16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (EE4N11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (EE4NB5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2697.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

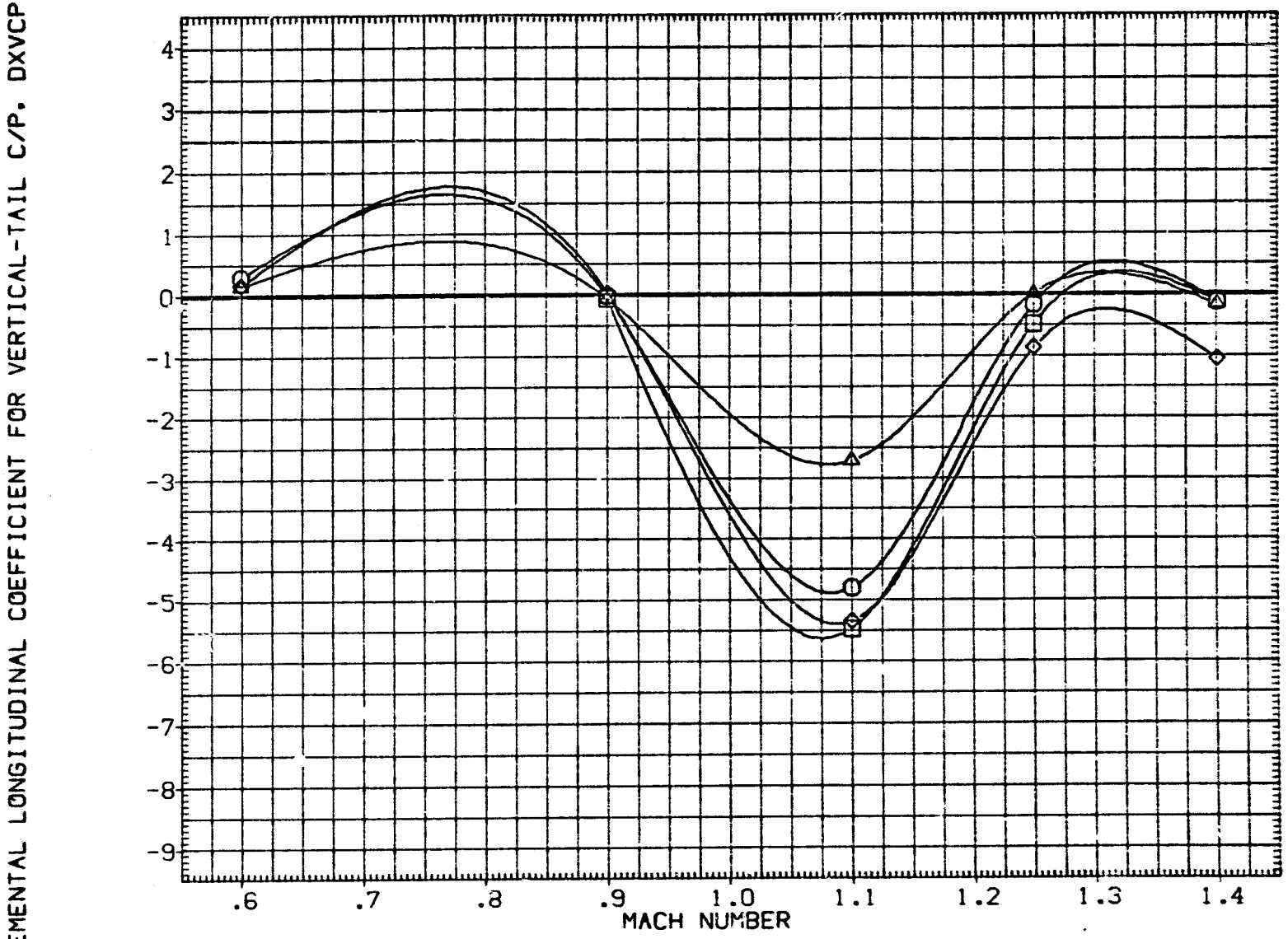



FIG. 121 SUMMARY, SSME PLUME EFFECTS ON VERTICAL TAIL CENTER OF PRESSURE

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (EE4N20) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (EE4N16) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (EE4N11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (EE4NB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

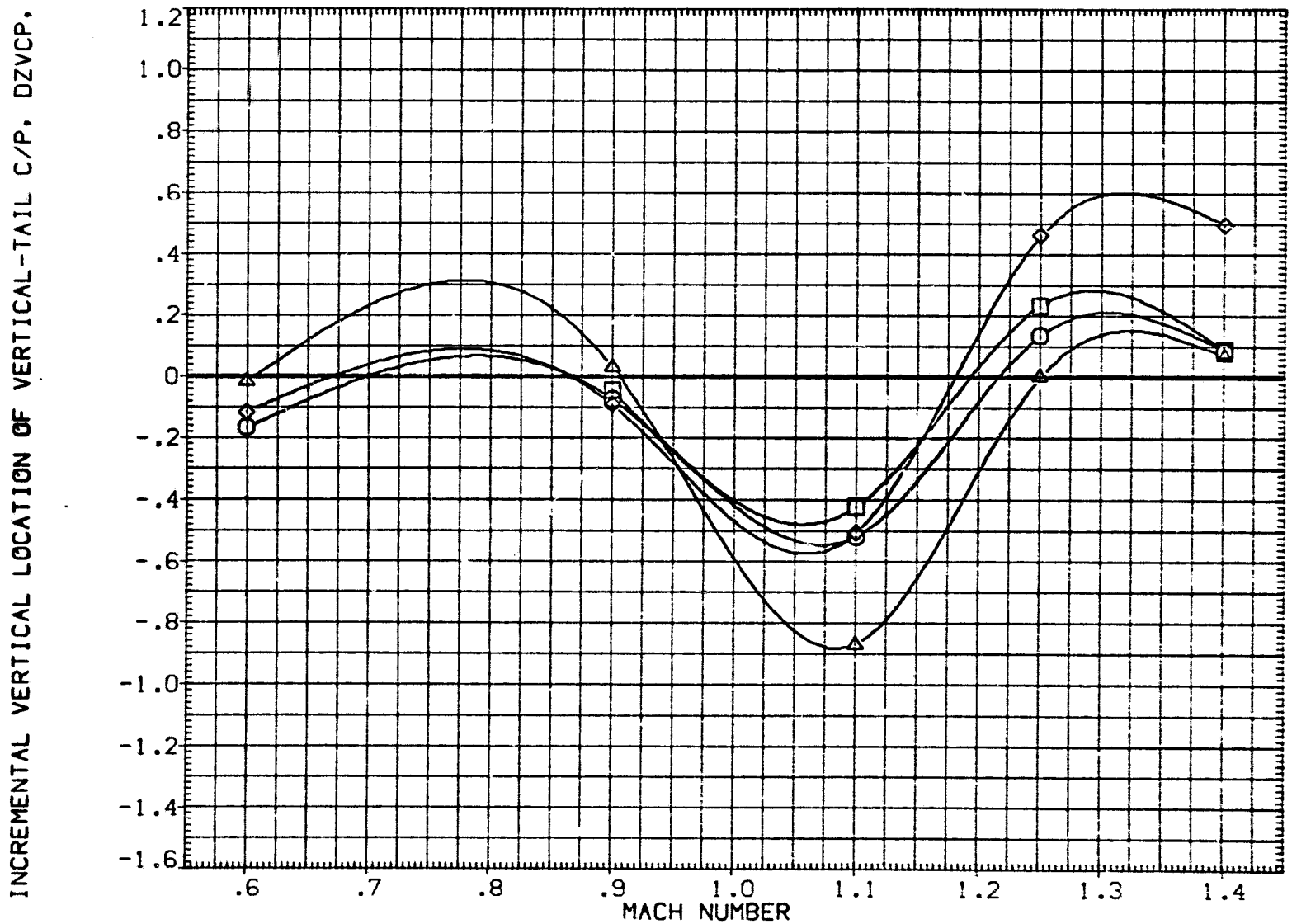



FIG. 121 SUMMARY, SSME PLUME EFFECTS ON VERTICAL TAIL CENTER OF PRESSURE

(A)BETA = .00

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA | RN/L |
|---|---|---|---|---|---|---|
| (RE4049) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .000 | 4.250 |
| (RE4050) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .000 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

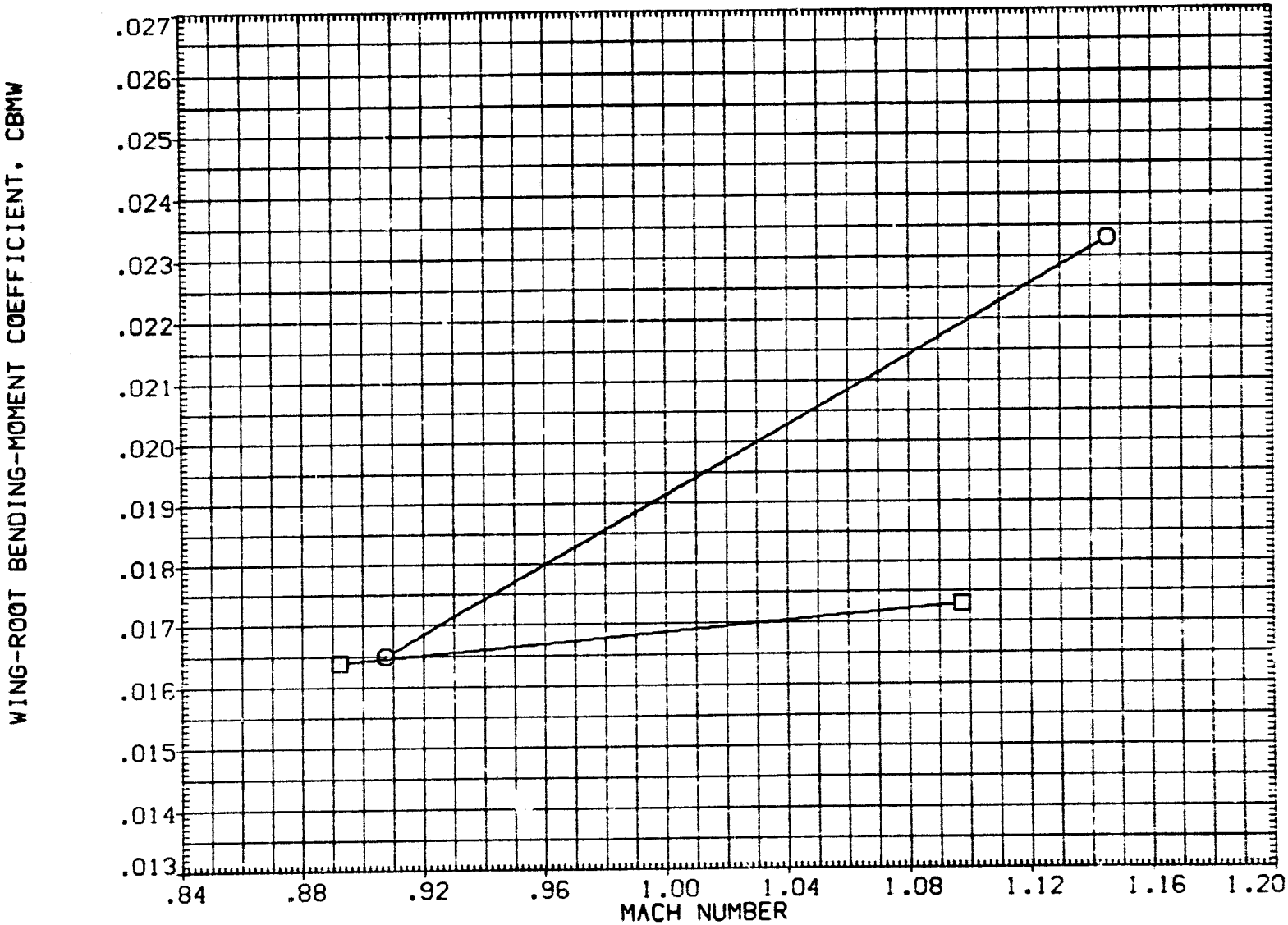



FIG. 122 SUMMARY, MACH RAMP MAXIMUM WING LOADS

(A)BETA = -.06

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA | RN/L |
|---|---|---|---|---|---|---|
| (RE4049) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .000 | 4.250 |
| (RE4050) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .000 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

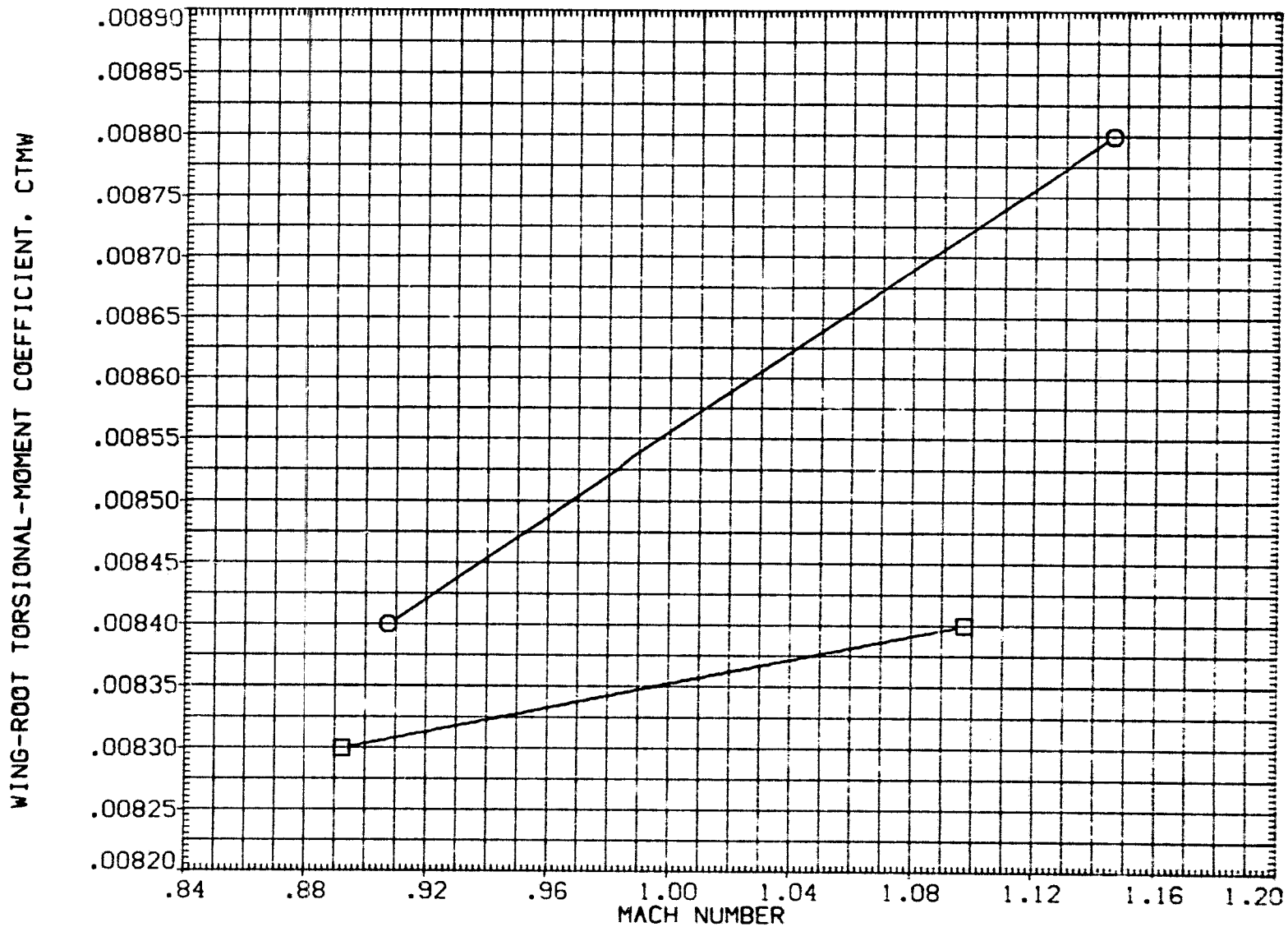



FIG. 122 SUMMARY, MACH RAMP MAXIMUM WING LOADS

(A)BETA = -.06

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA | RN/L |
|---|---|---|---|---|---|---|
| (RE4049) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .000 | 4.250 |
| (RE4050) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .000 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

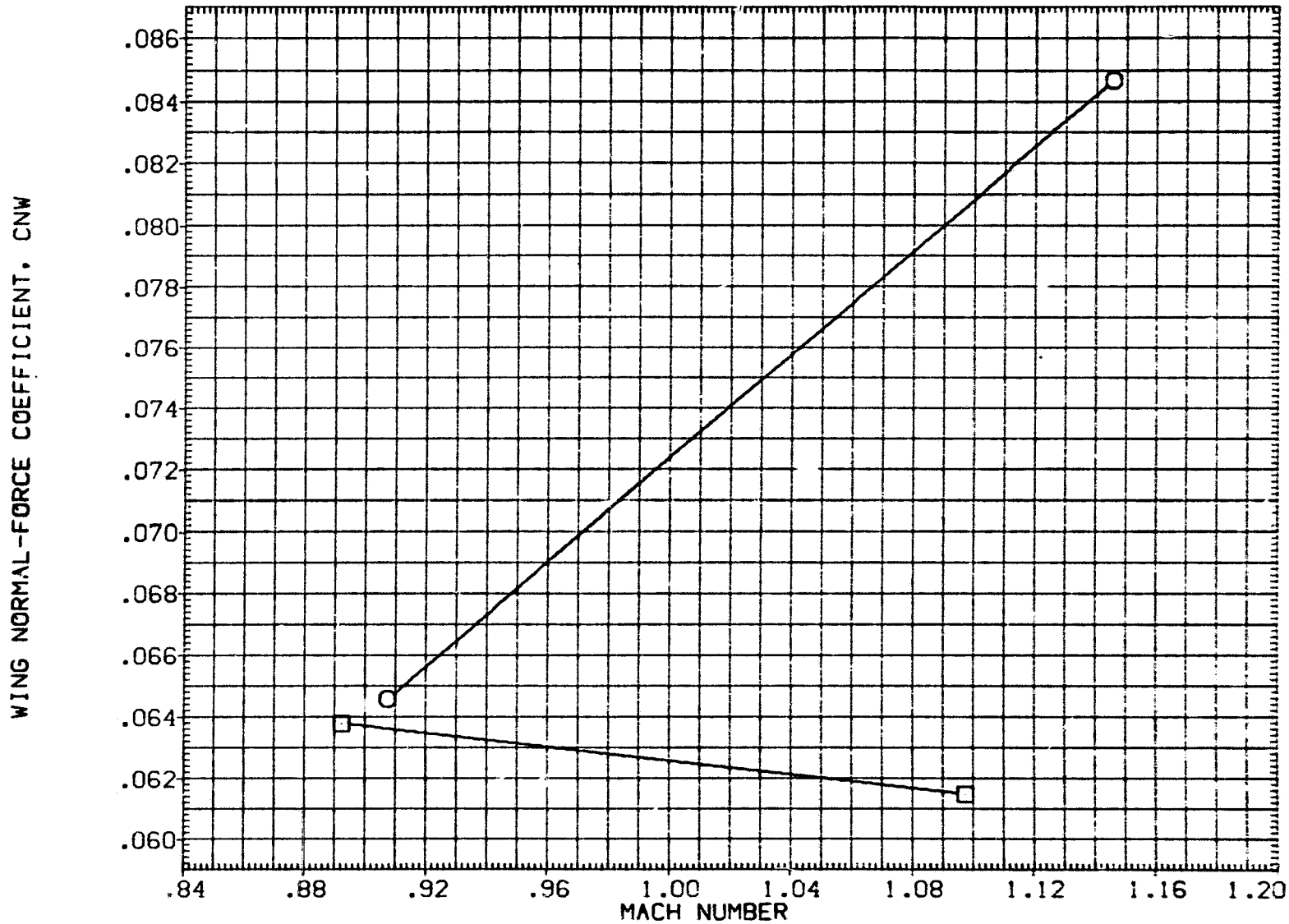



FIG. 122 SUMMARY, MACH RAMP MAXIMUM WING LOADS

(A)BETA = -.06

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA | RN/L |
|---|---|---|---|---|---|---|
| (RE4049) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .000 | 4.250 |
| (RE4050) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .000 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

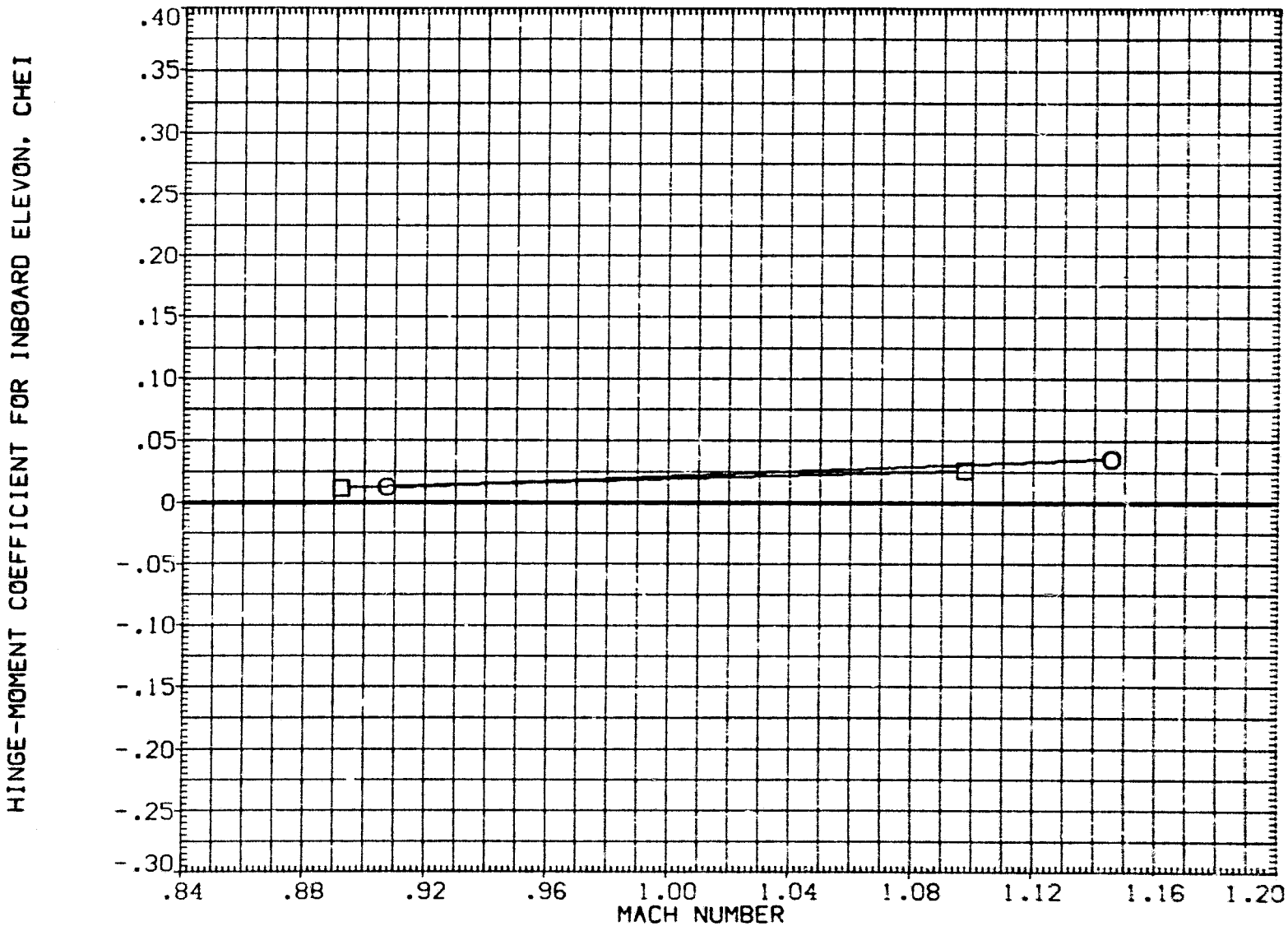



FIG. 123 SUMMARY, MACH RAMP MAXIMUM ELEVON HINGE MOMENTS

(A)BETA = -.06

| DATA SET SYMBOL | | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA | RN/L |
|---|---|---|---|---|---|---|
| (RE4049) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | 8.000 | 4.000 | .000 | 4.250 |
| (RE4050) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | 8.000 | 4.000 | .000 | 4.250 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

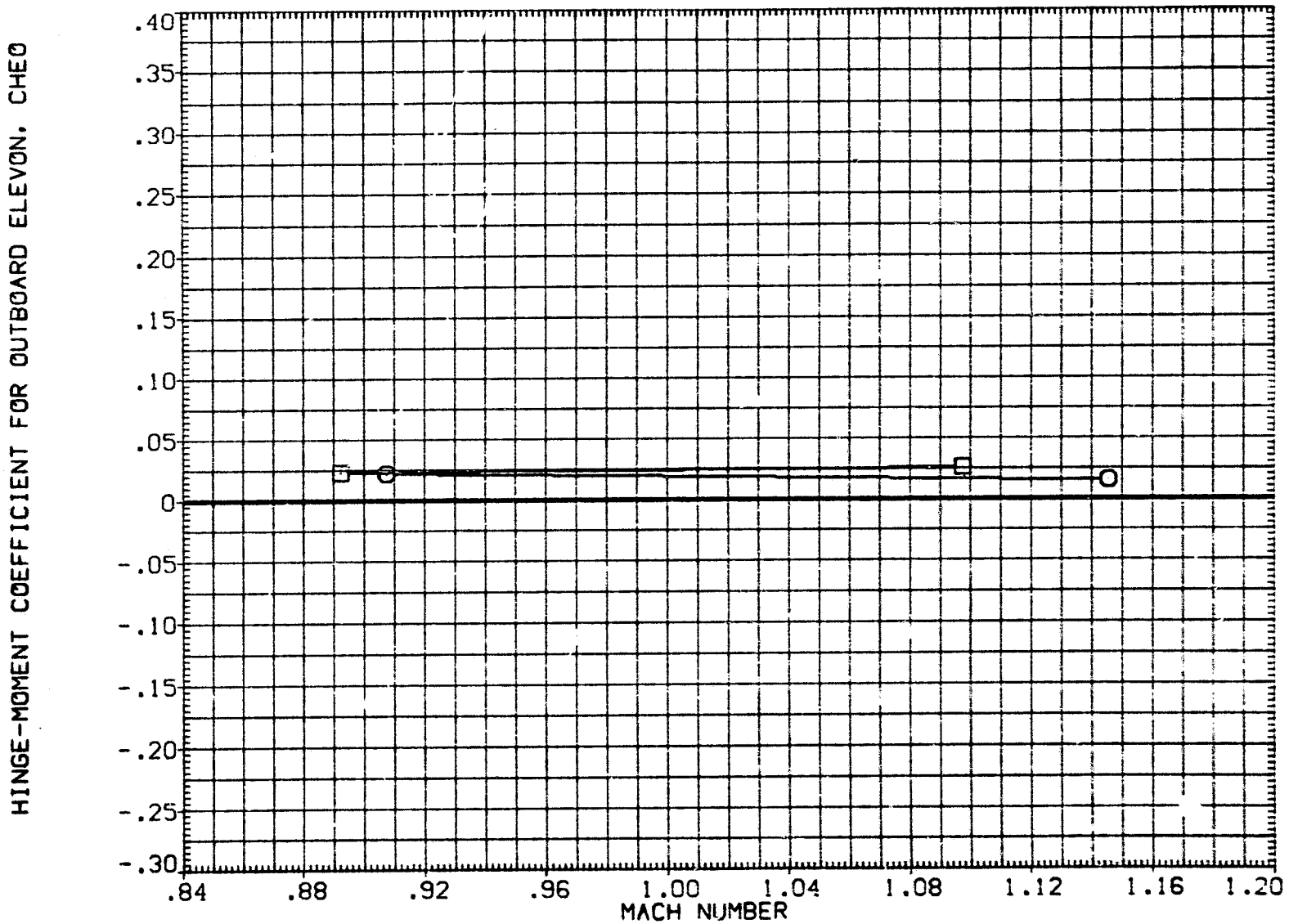



FIG. 123 SUMMARY, MACH RAMP MAXIMUM ELEVON HINGE MOMENTS

(A)BETA = -.06

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4N28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (AE4N20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (AE4N16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (AE4N11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (AE4NB0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (AE4NB5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.0000 | IN. |
| BREF | 1290.0000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

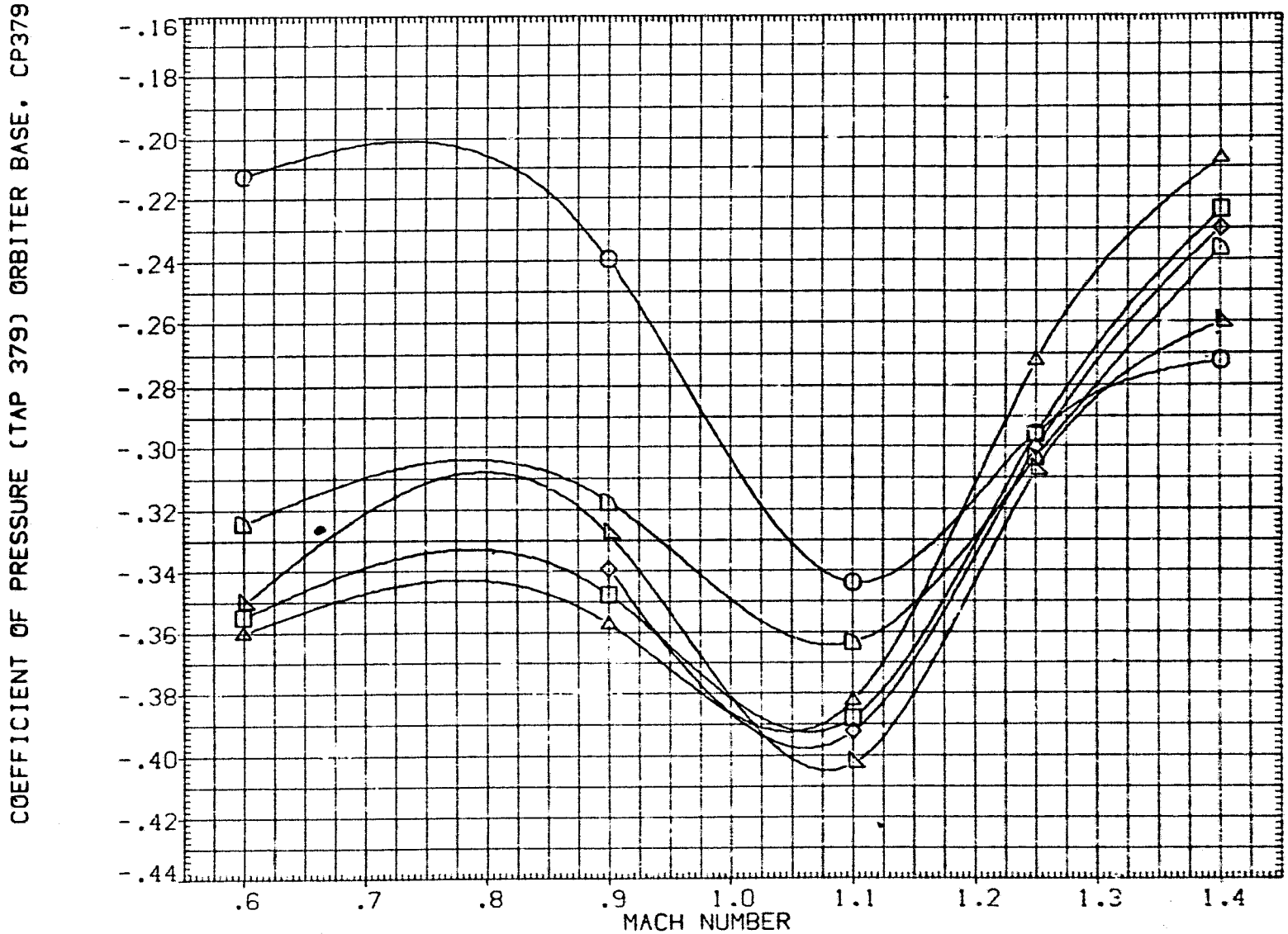



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (AE4N28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (AE4N20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (AE4N16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (AE4N11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (AE4NB0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (AE4NB5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

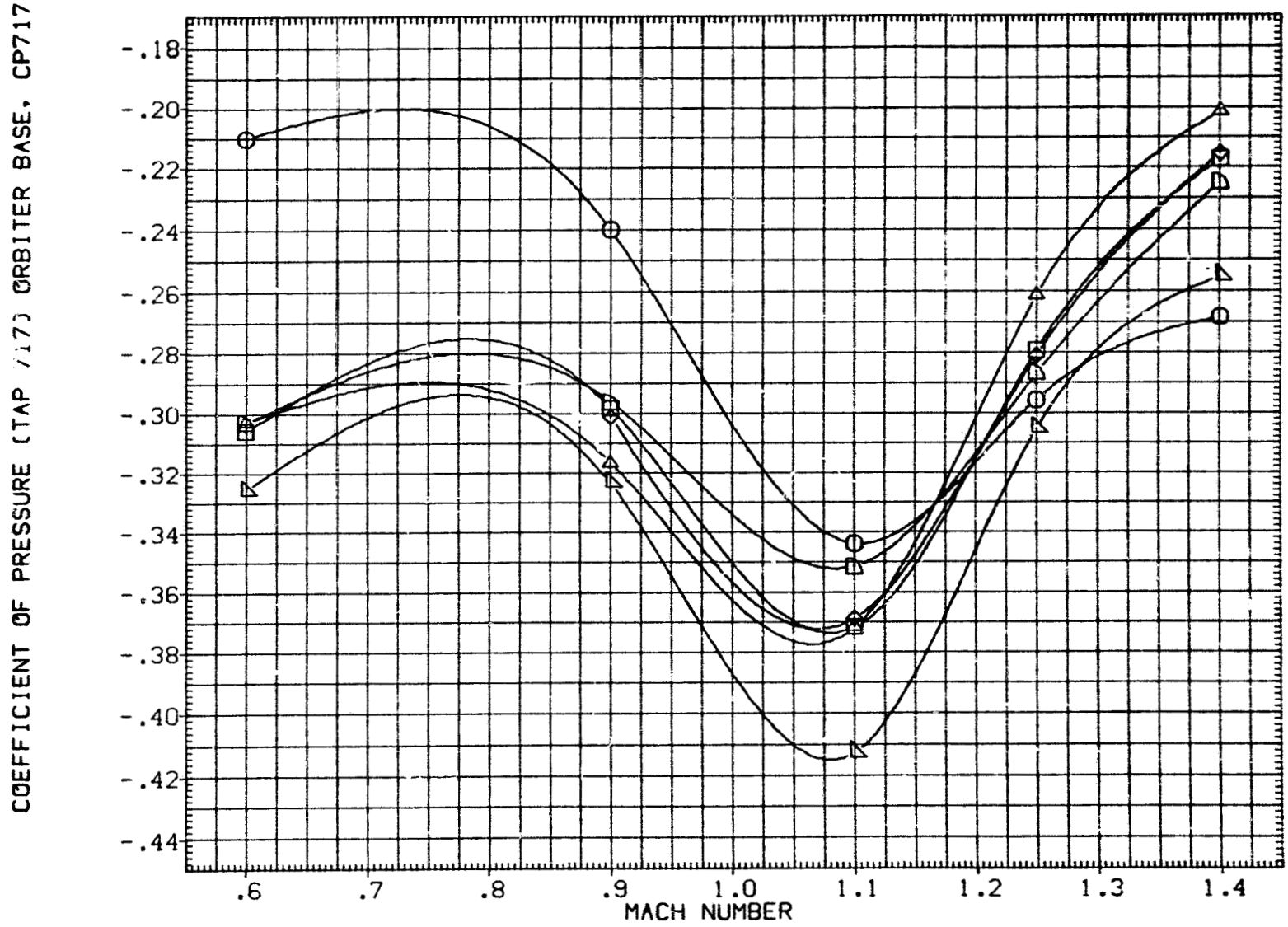



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4N28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (AE4N20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (AE4N16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (AE4N11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (AE4NB0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (AE4NB5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

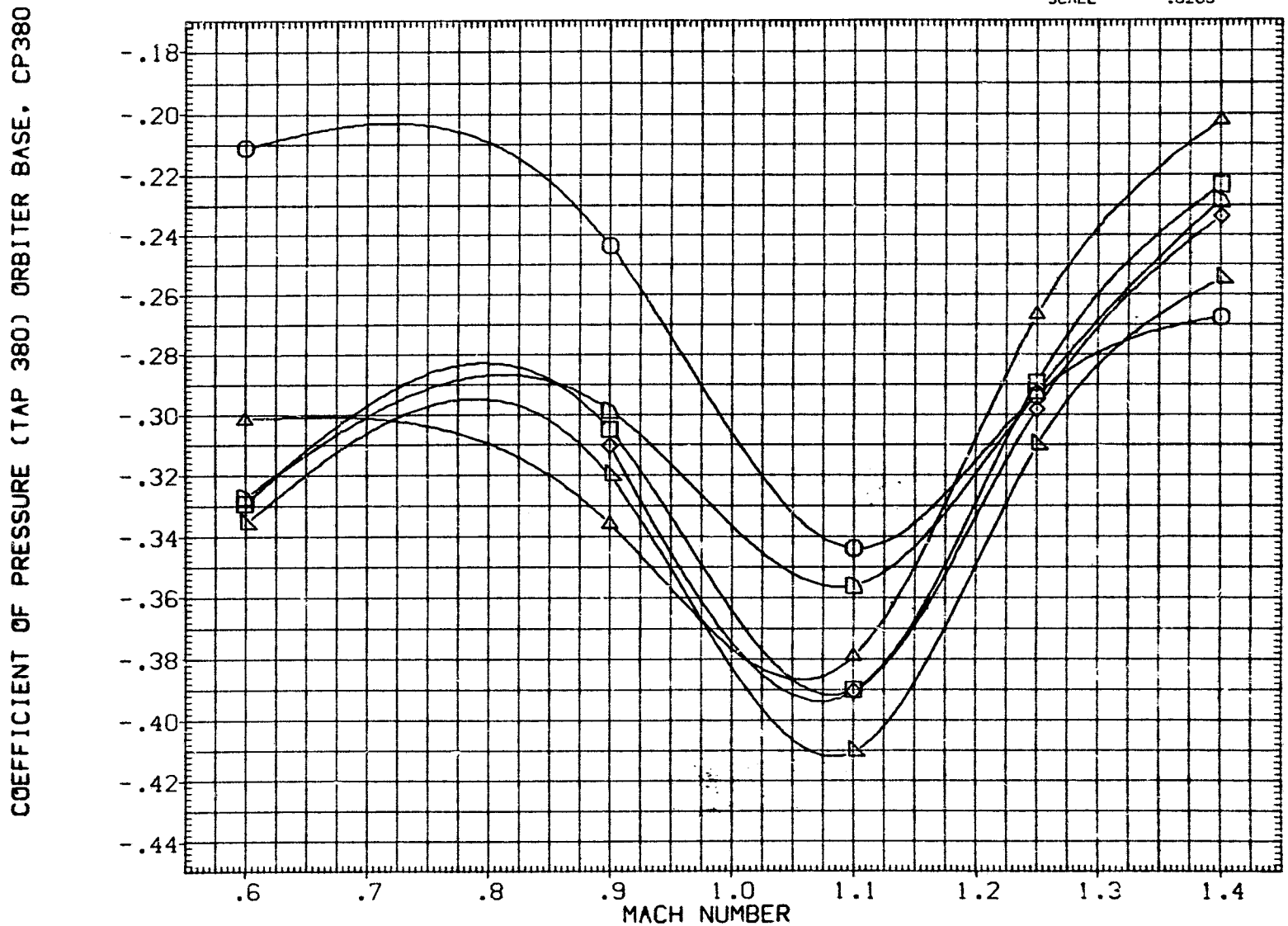



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (AE4N28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (AE4N20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (AE4N16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (AE4N11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (AE4NB0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (AE4NB5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

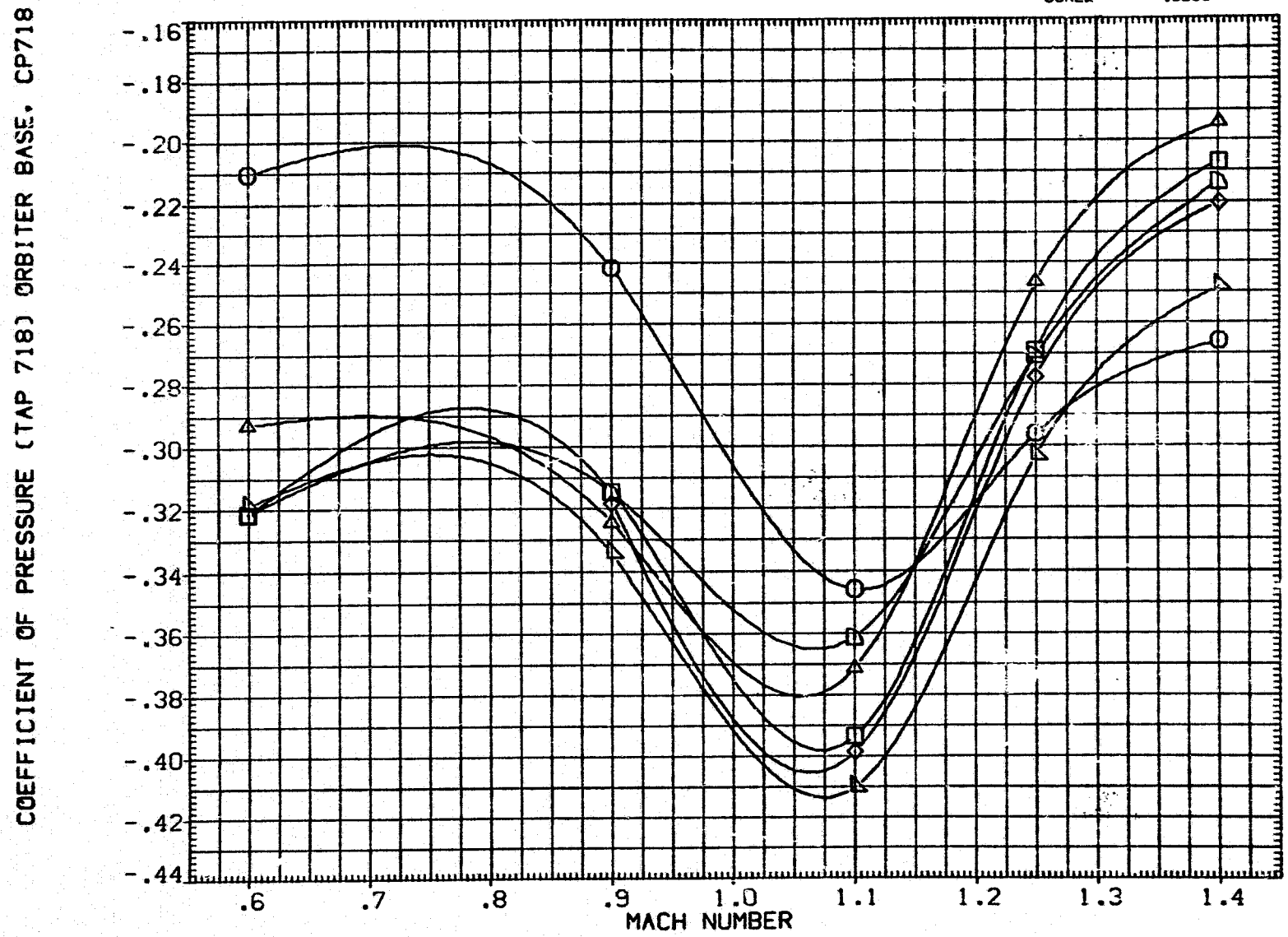



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4N28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (AE4N20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (AE4N16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (AE4N11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (AE4NB0) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (AE4NB5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

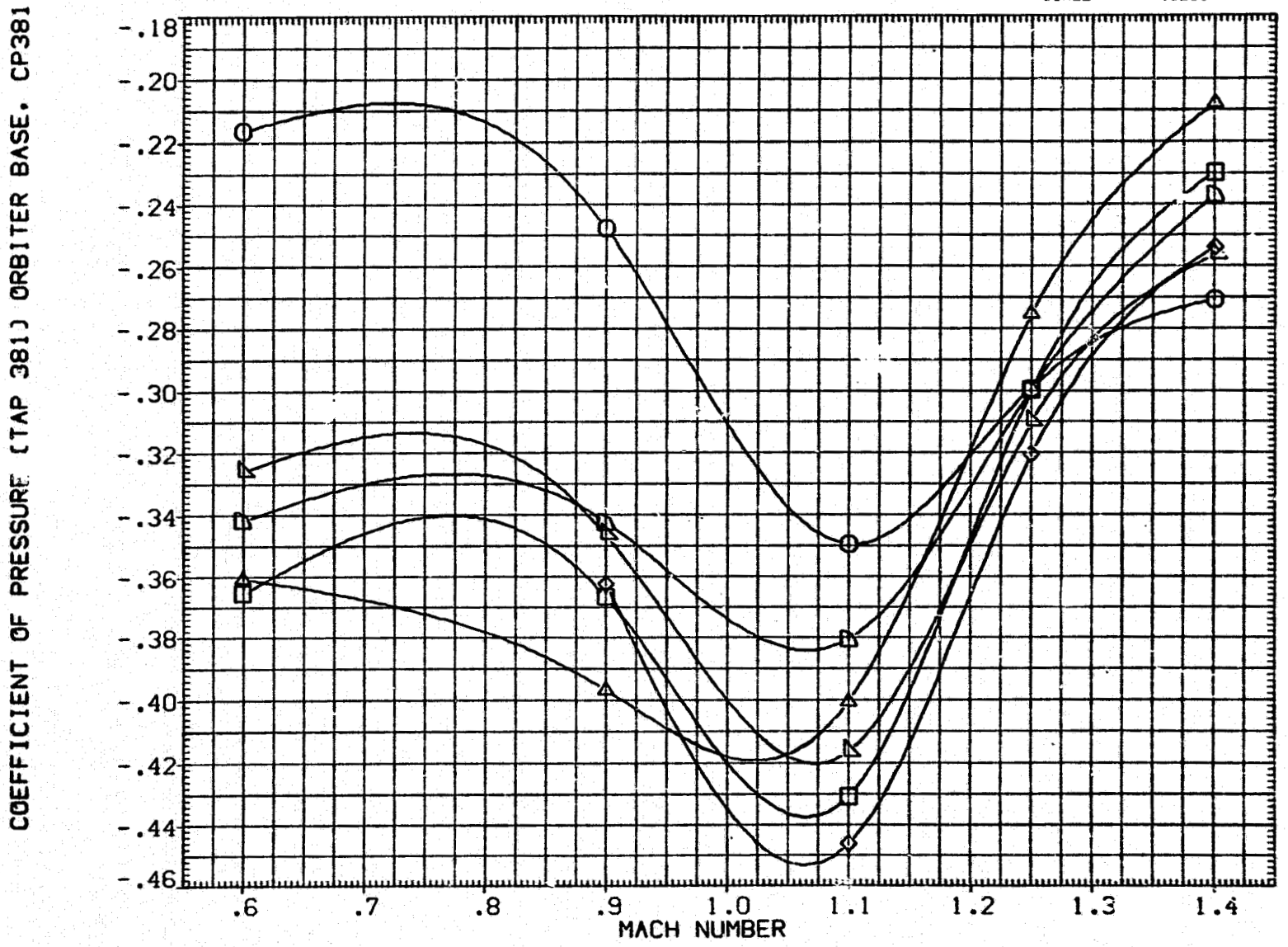



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4N28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (AE4N20) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (AE4N16) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (AE4N11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (AE4NB0) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (AE4NB5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

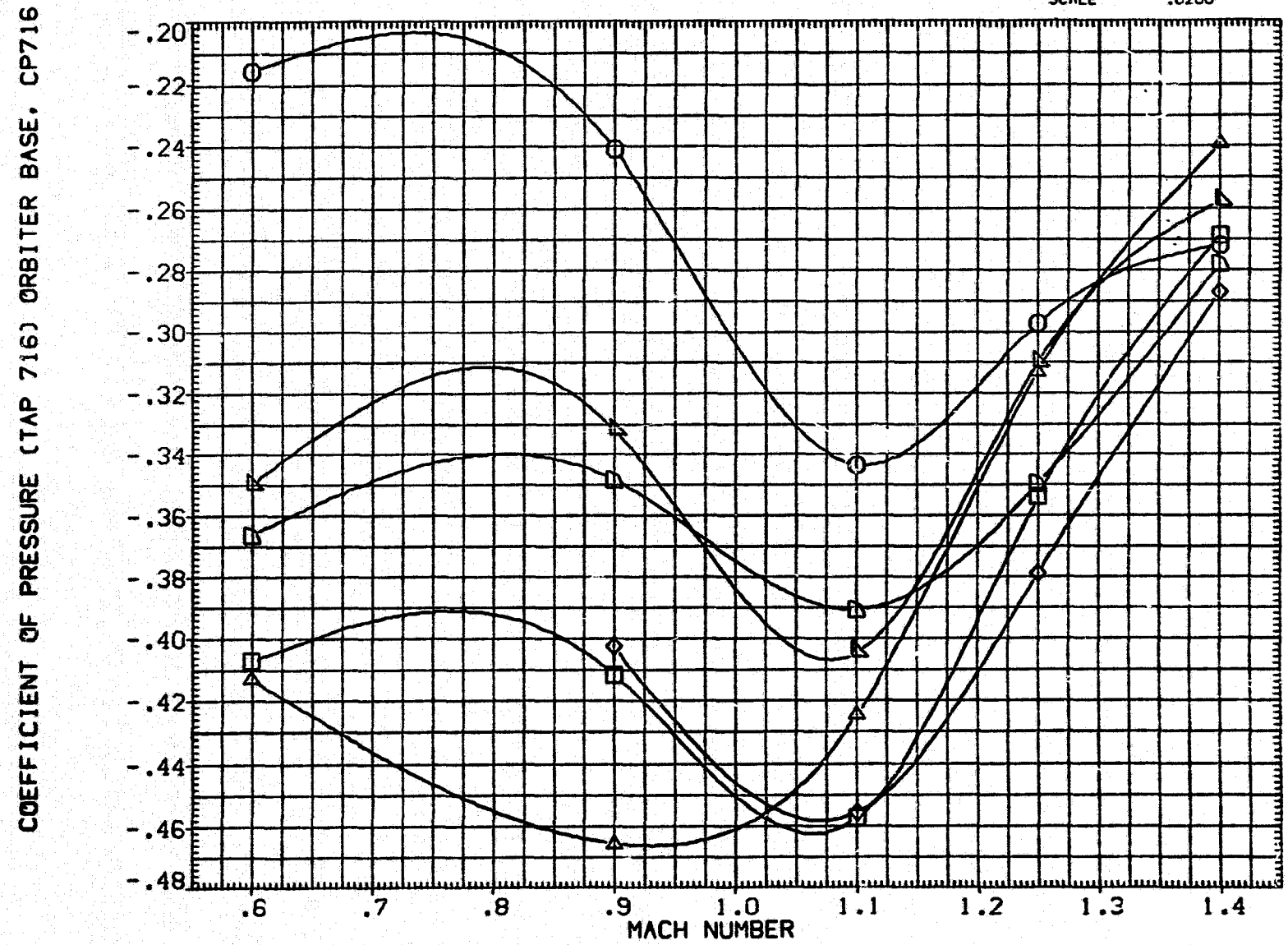



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4N28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (AE4N20) | | ARC 11-023 IA80 OTS (SRD NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (AE4N16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (AE4N11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (AE4N80) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (AE4N85) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

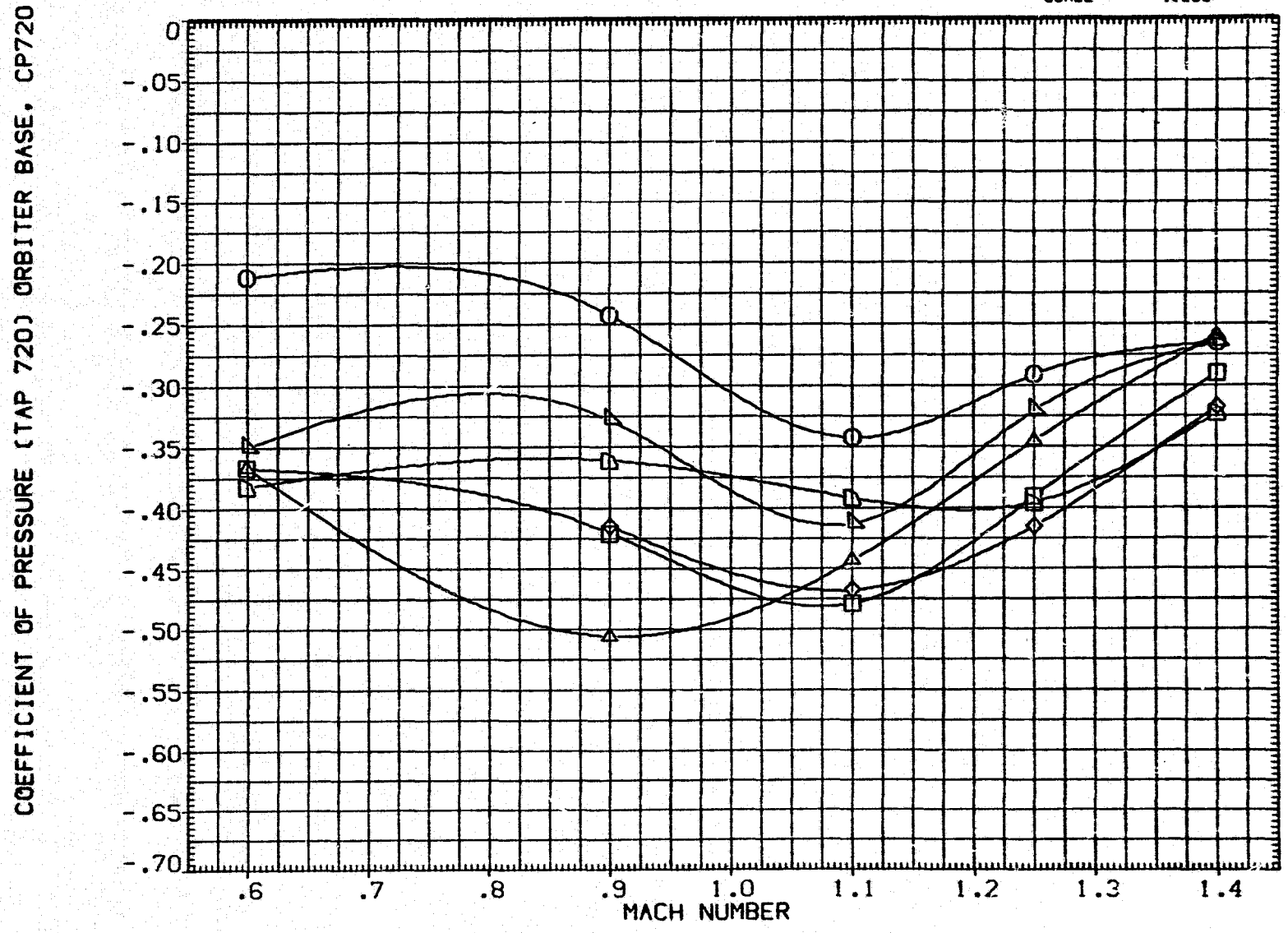



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4N28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (AE4N20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (AE4N16) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (AE4N11) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (AE4N80) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (AE4N85) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

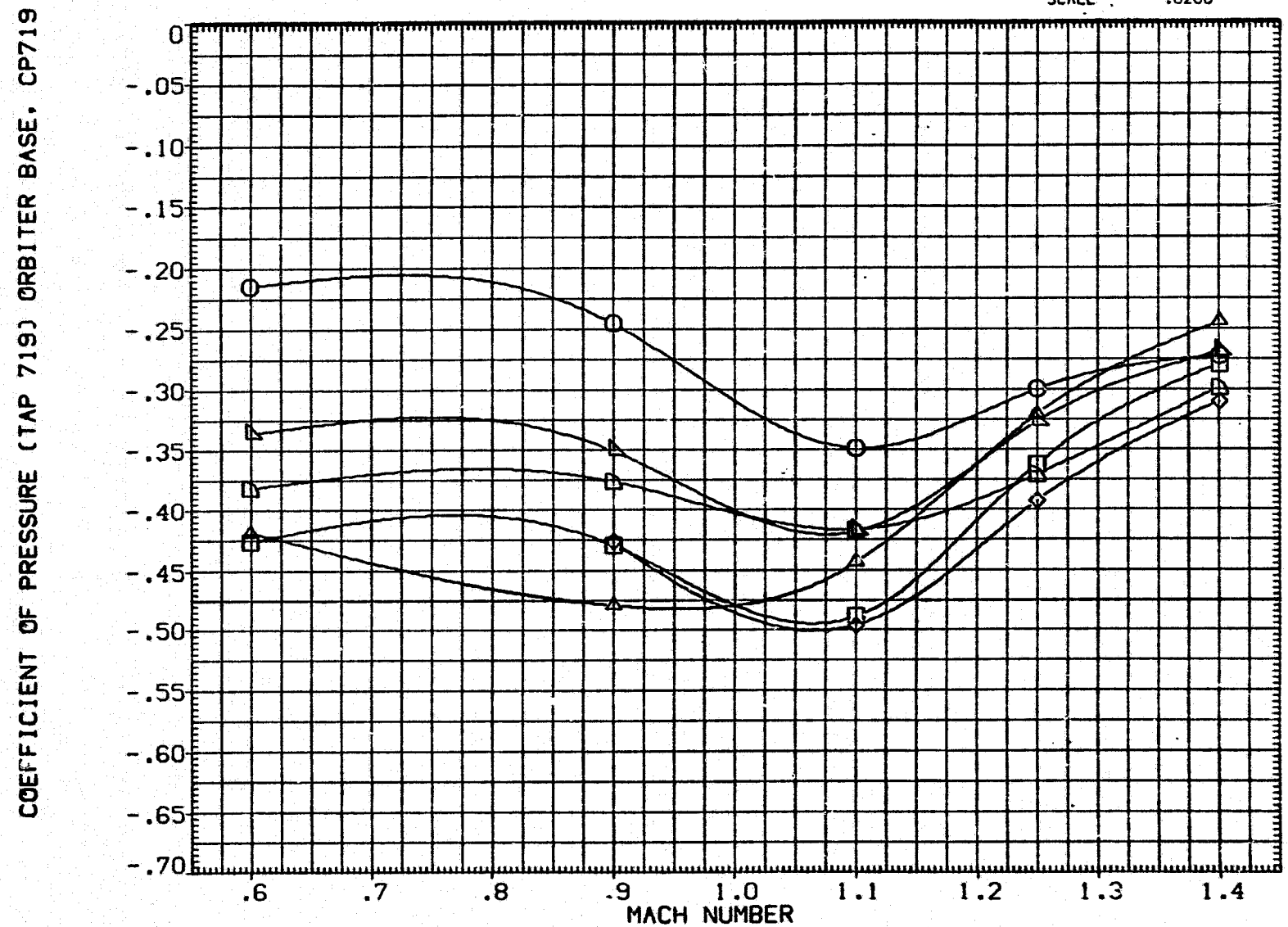



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4N28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (AE4N20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (AE4N16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (AE4N11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (AE4N80) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (AE4N85) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

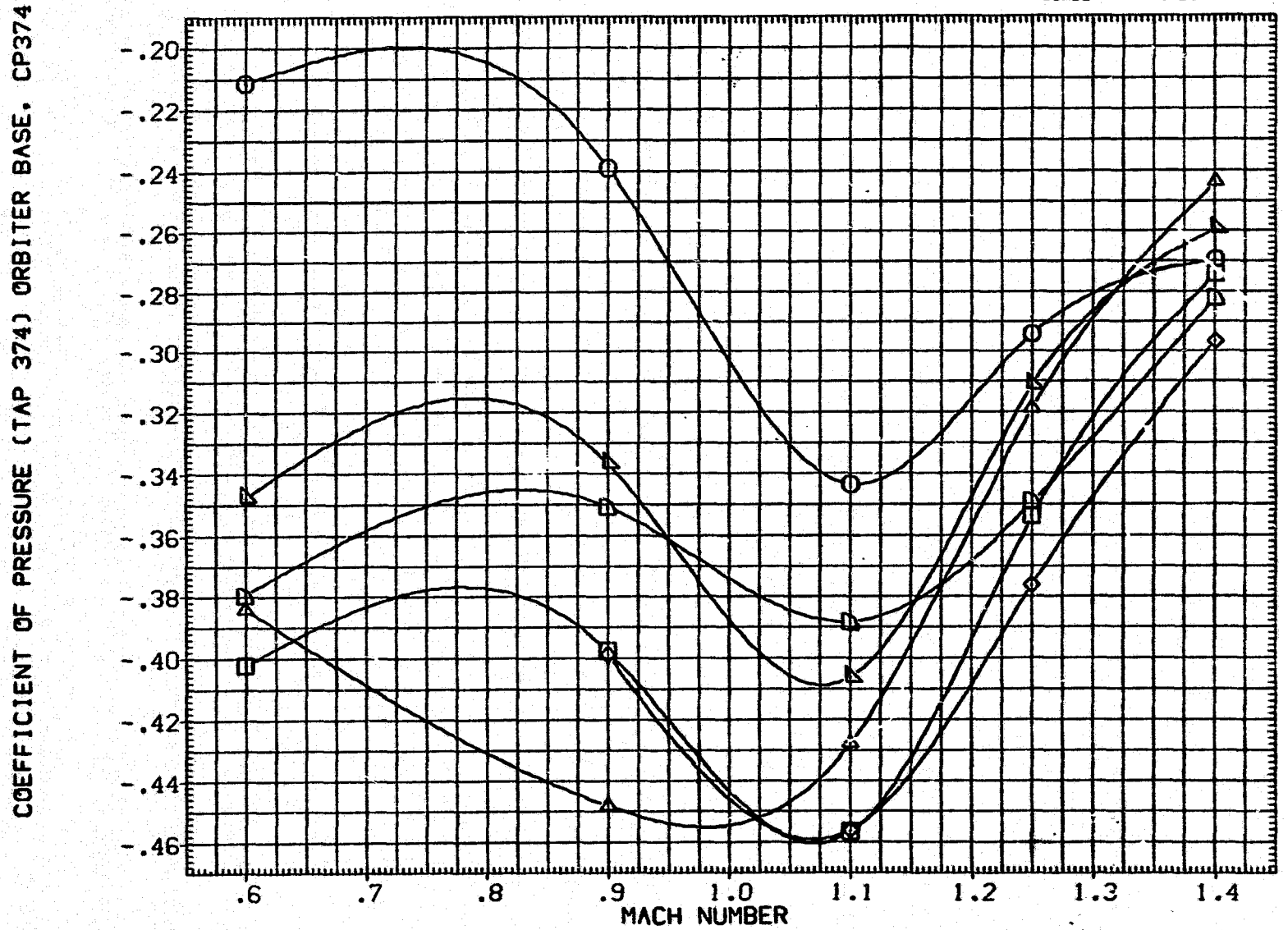



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (AE4N28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (AE4N20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (AE4N16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (AE4N11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (AE4NB0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (AE4NB5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

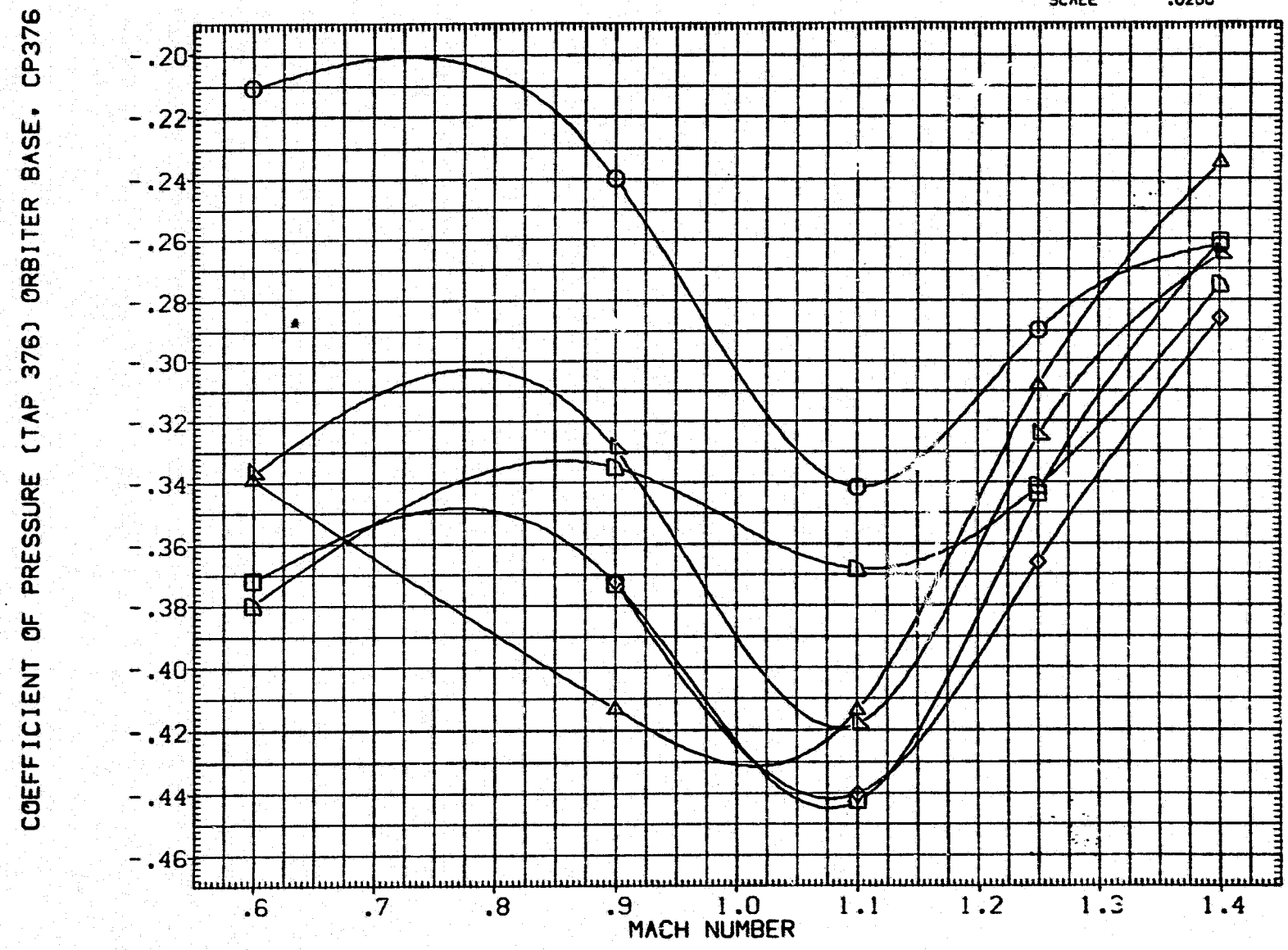



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4N28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (FE4N20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (FE4N16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (FE4N11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (FE4NB0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (FE4NB5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

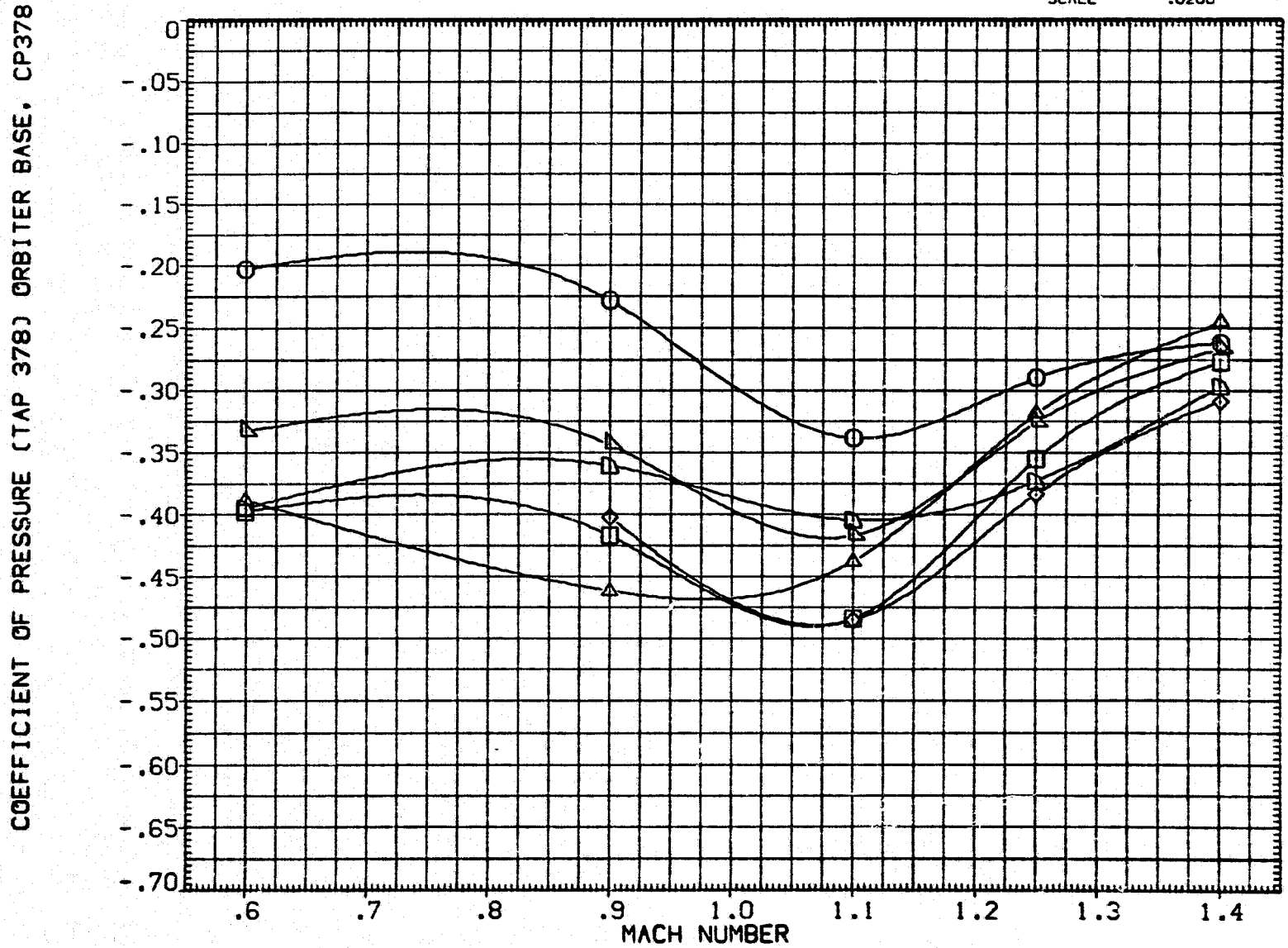



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4N28) | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (FE4N2O) | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (FE4N16) | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (FE4N11) | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (FE4N8O) | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (FE4N85) | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

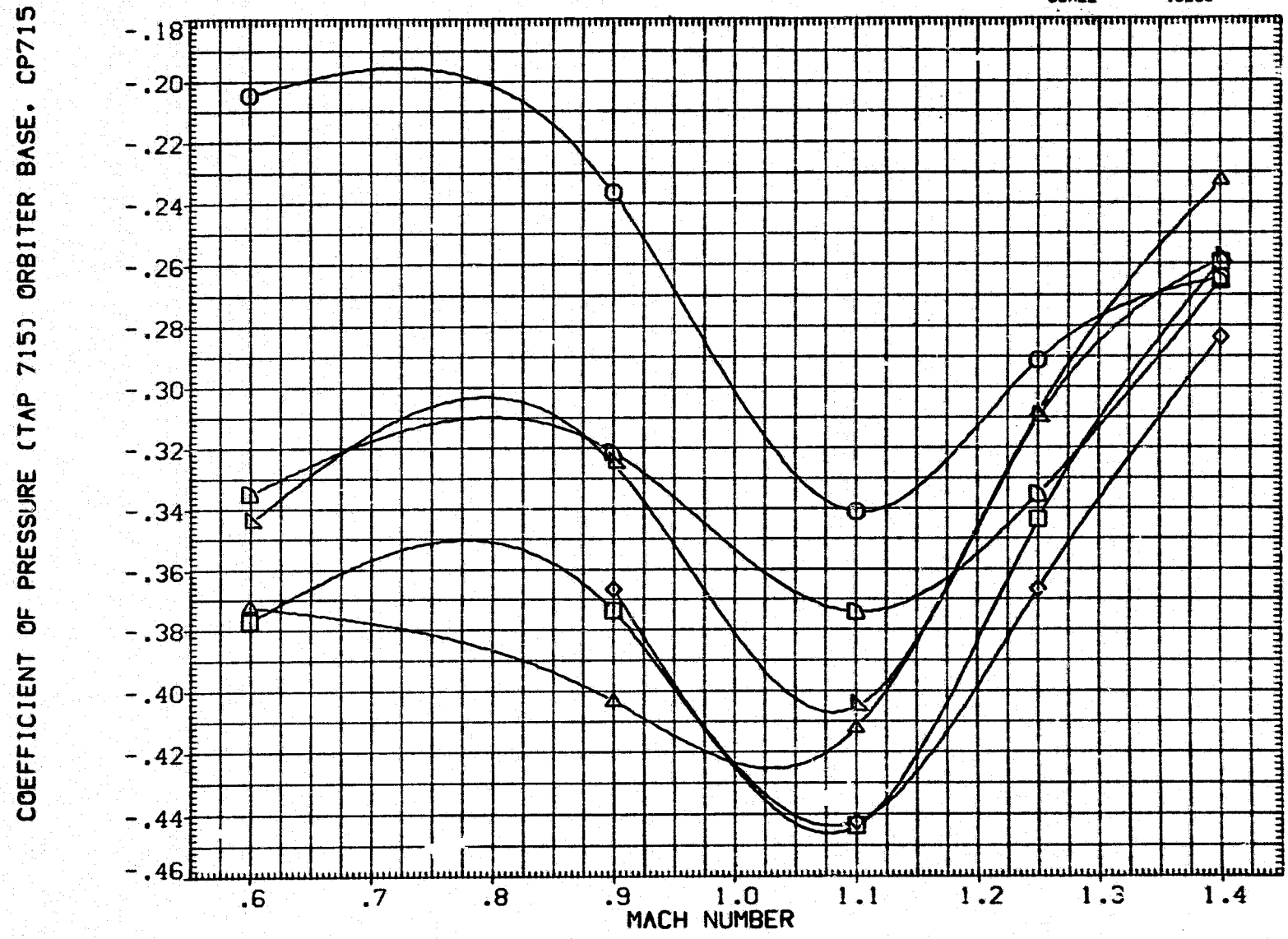



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4N28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (FE4N2D) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (FE4N16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (FE4N11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (FE4NB0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (FE4NB5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

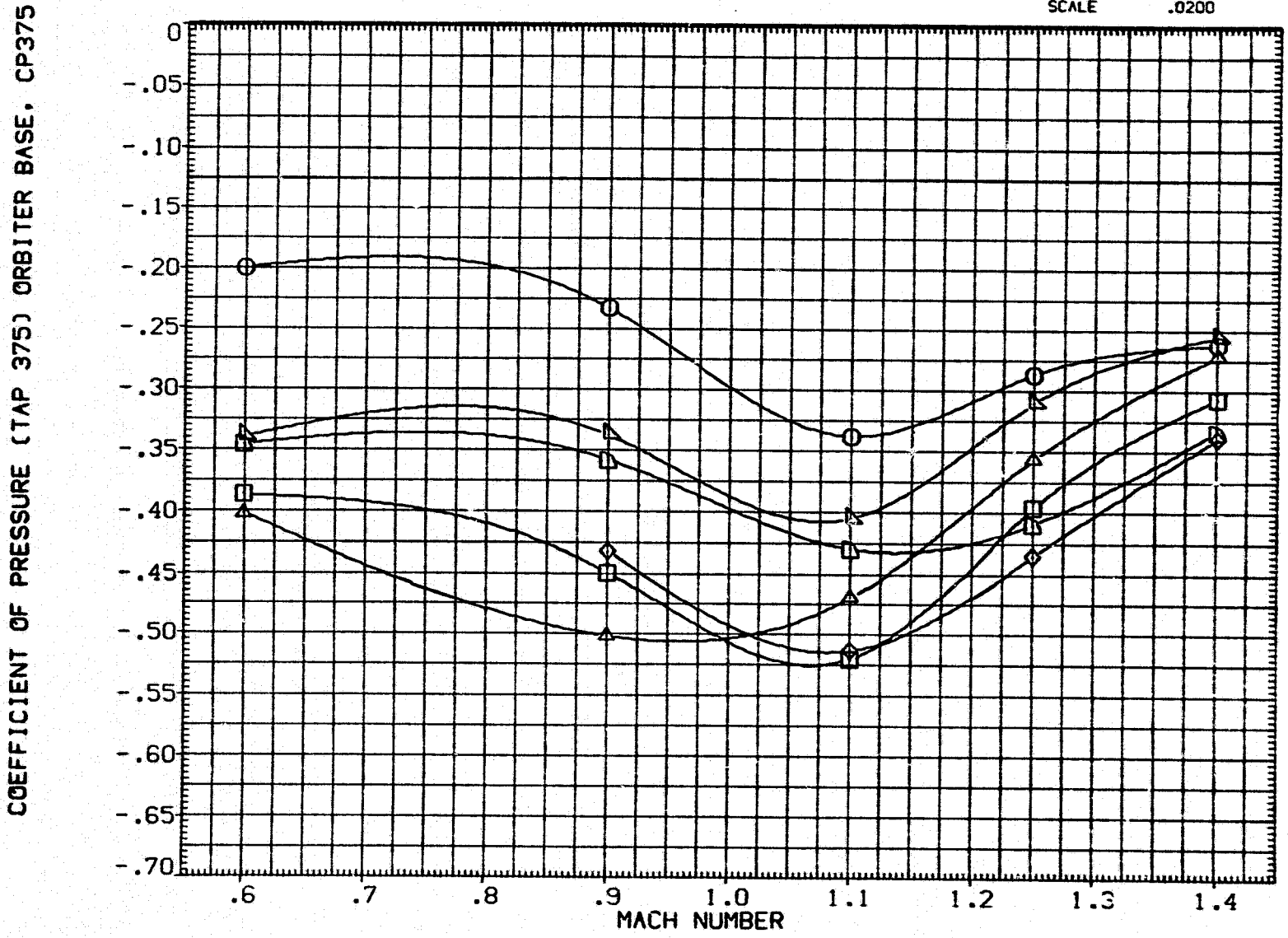



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4N28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (FE4N20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (FE4N16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (FE4N11) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (FE4NB0) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (FE4NB5) | ⬠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

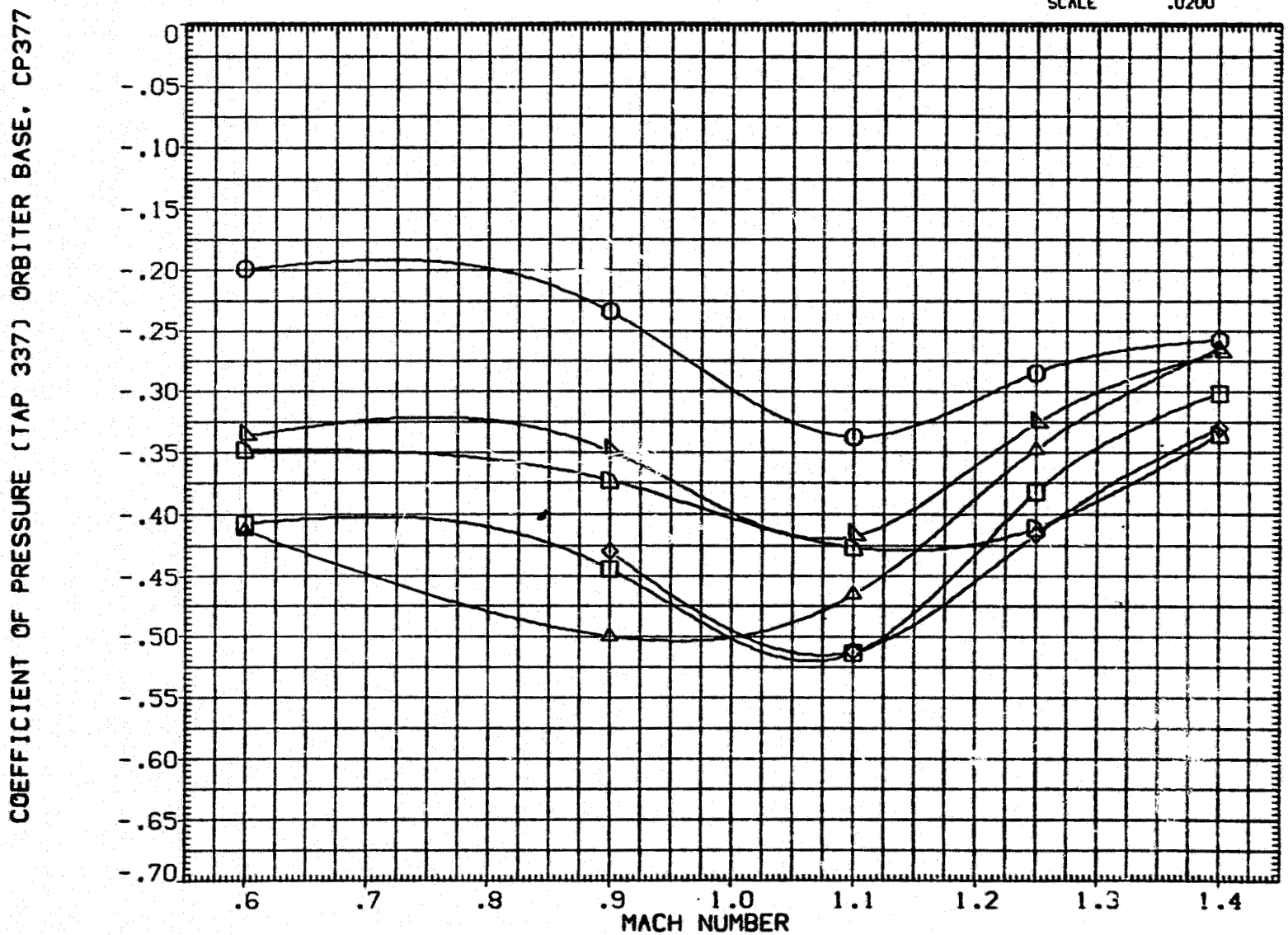



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4N28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (FE4N20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (FE4N16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (FE4N11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (FE4NB0) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (FE4NB5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

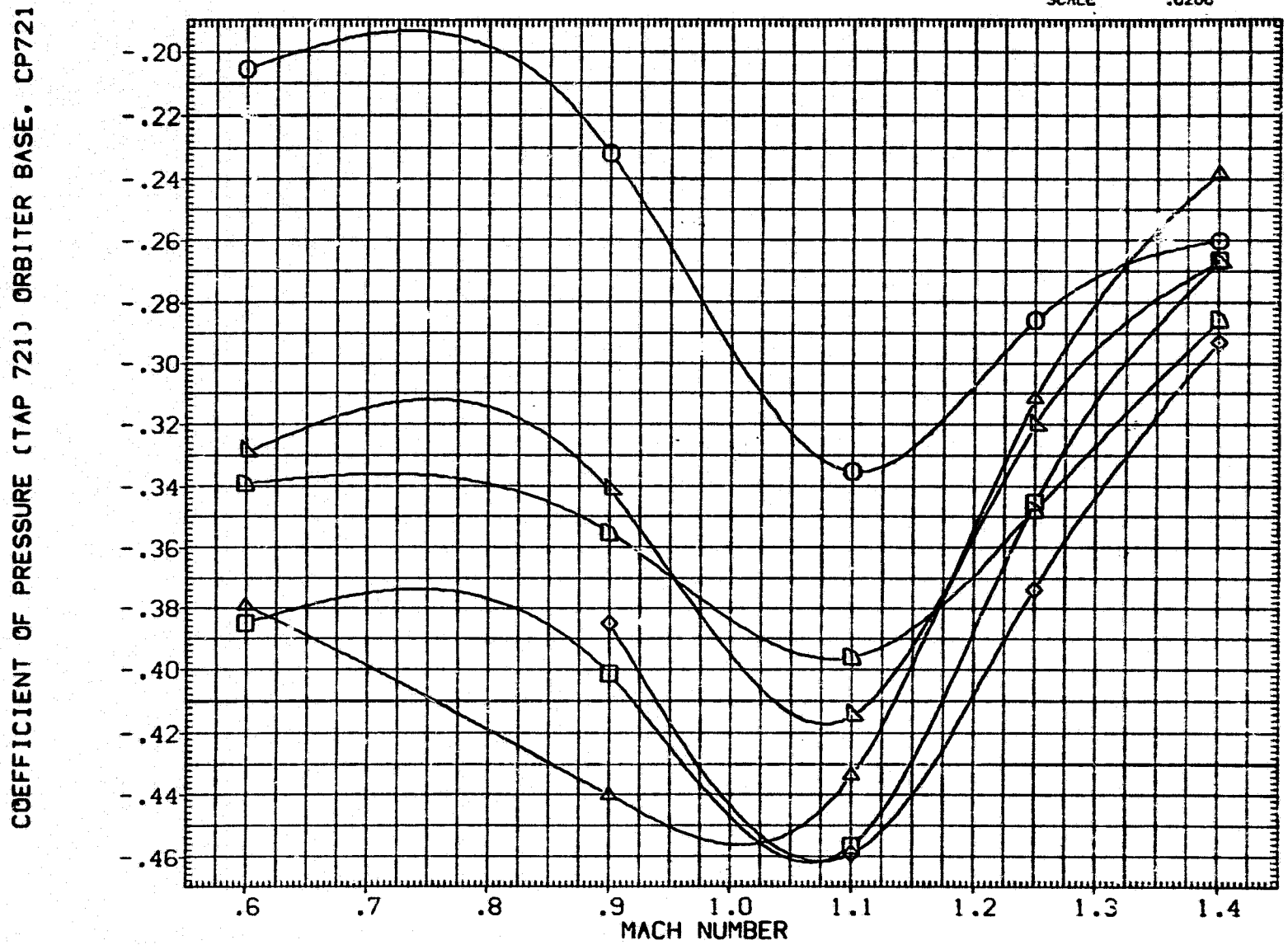



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4N28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (FE4N20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (FE4N16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (FE4N11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (FE4N80) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (FE4N85) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

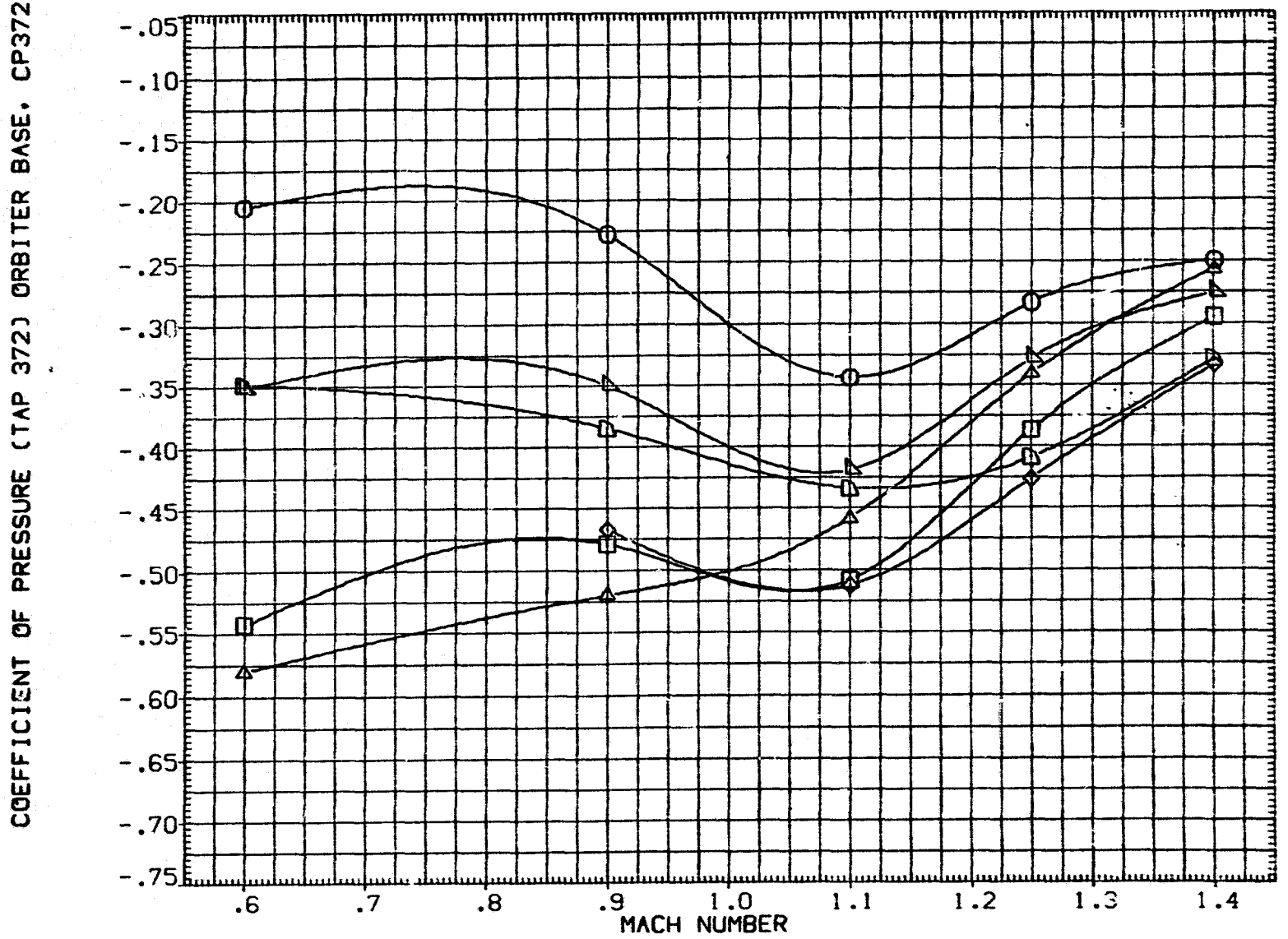



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4N28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (FE4N20) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (FE4N16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (FE4N11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (FE4NB0) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (FE4NB5) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

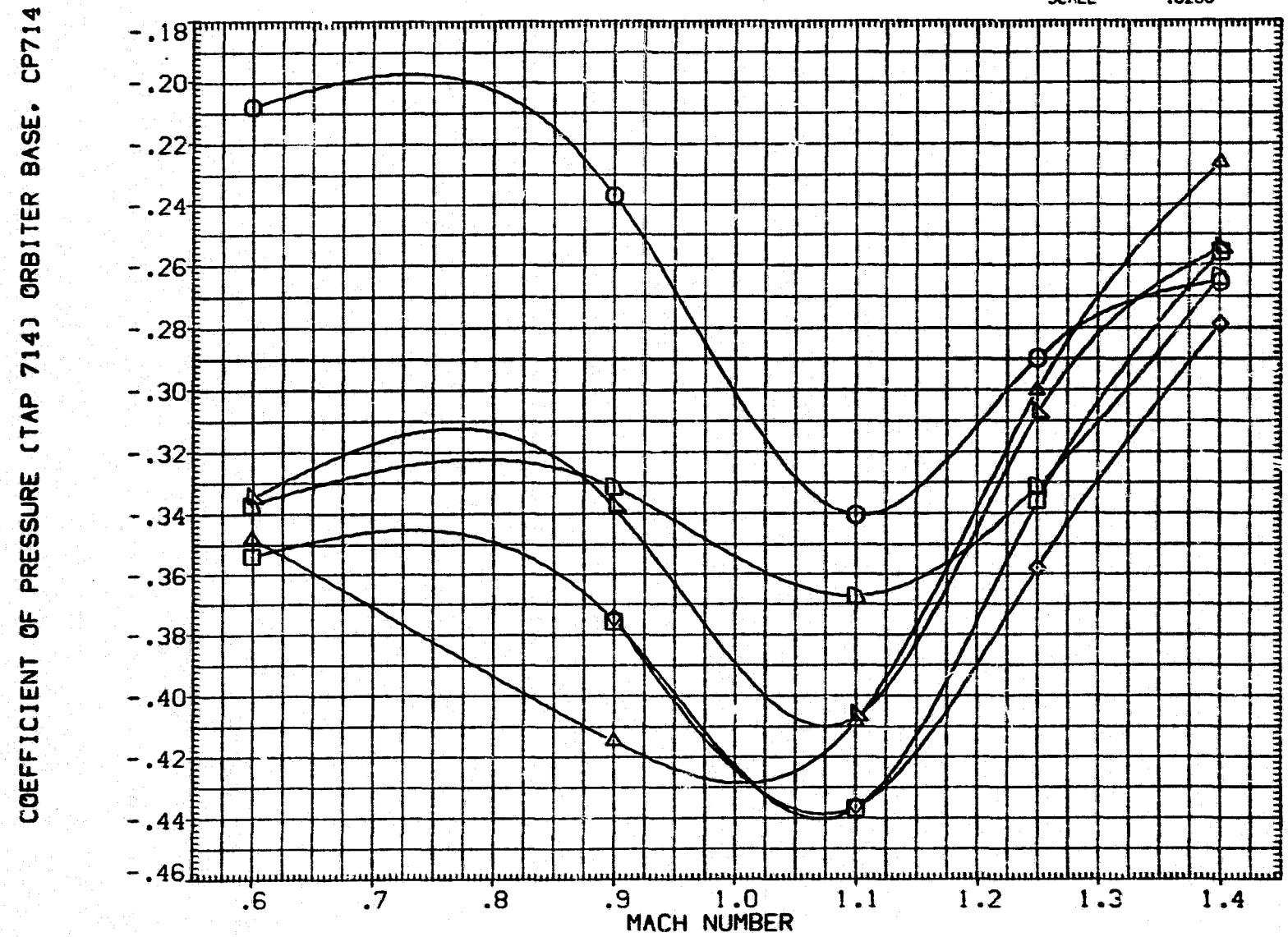



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4N28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (FE4N20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (FE4N16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (FE4N11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (FE4NB0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (FE4NB5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

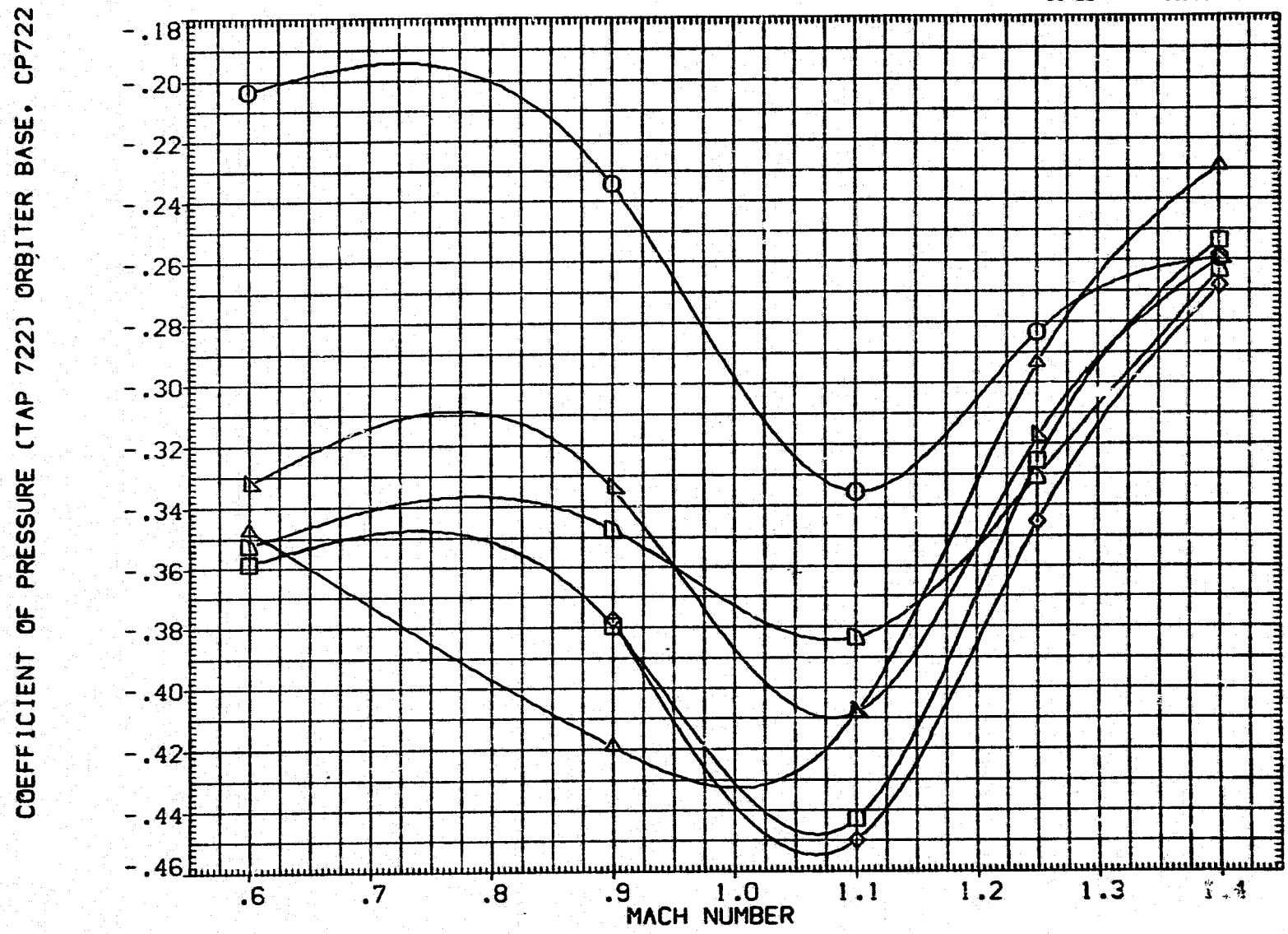



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4N28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (FE4N20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (FE4N16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (FE4N11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (FE4NB0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (FE4NB5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

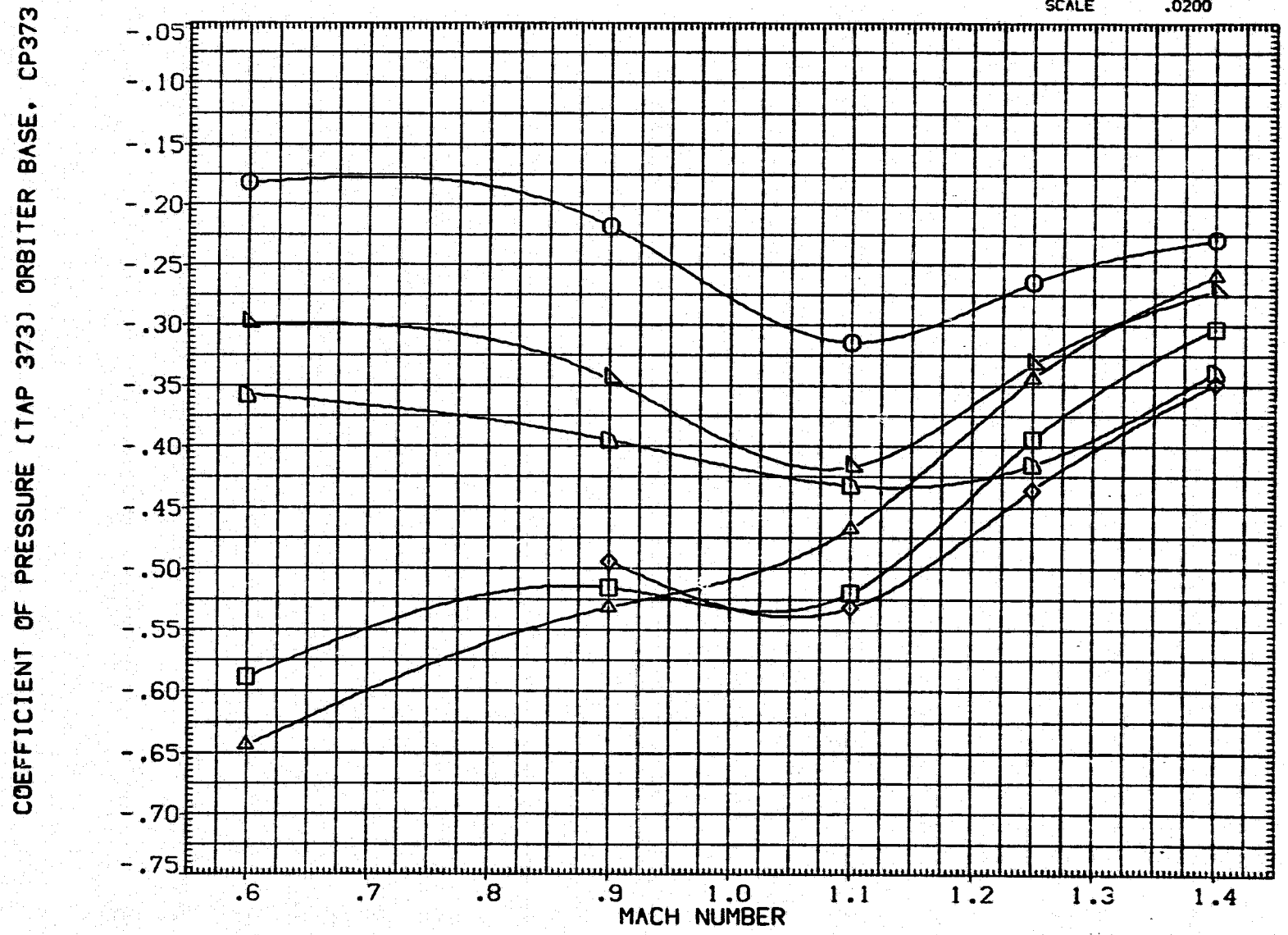



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4N28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (FE4N20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (FE4N16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (FE4N11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (FE4NB0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (FE4NB5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

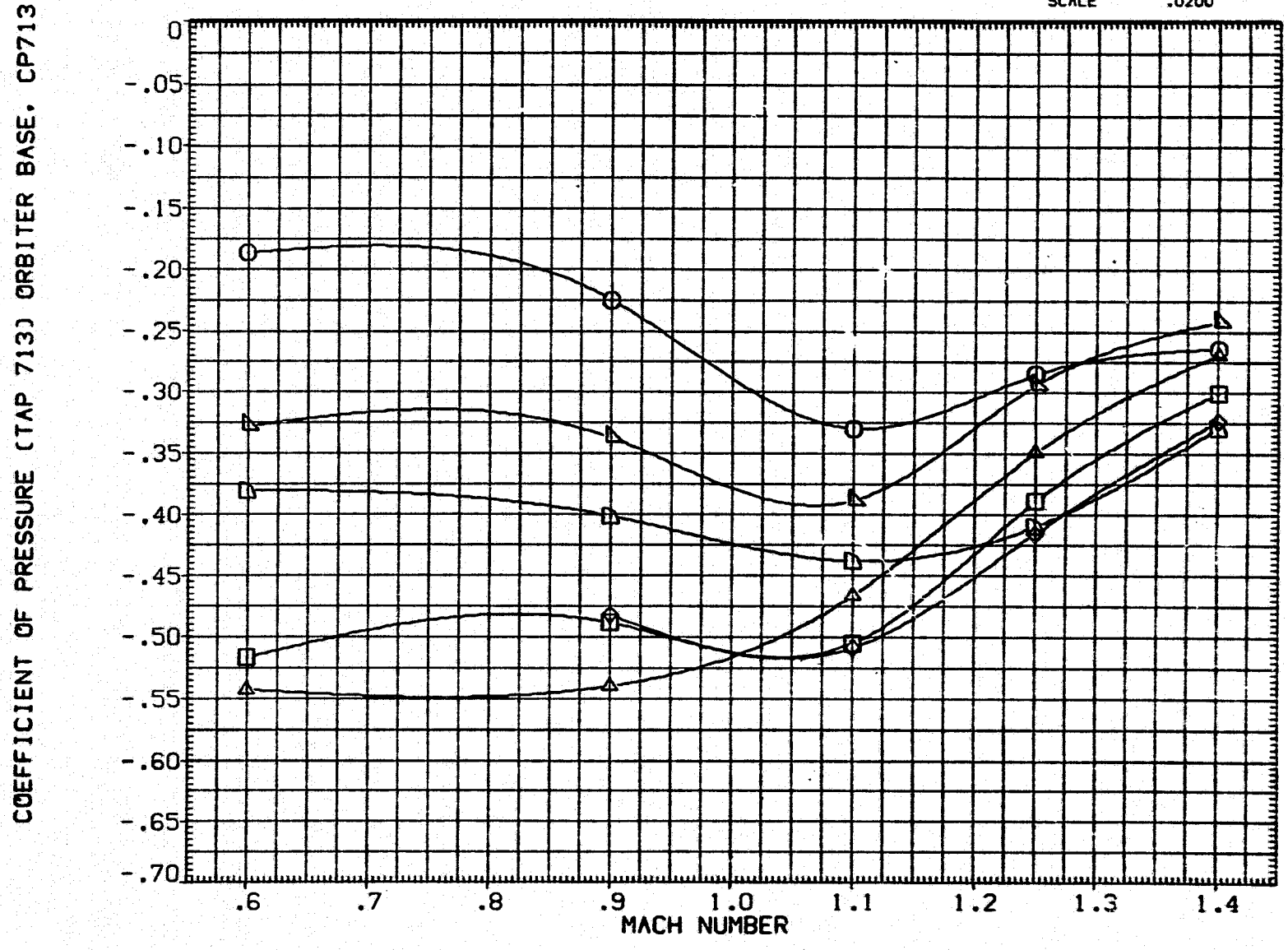



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4N28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (GE4N20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (GE4N16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (GE4N11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (GE4NB0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (GE4NB5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

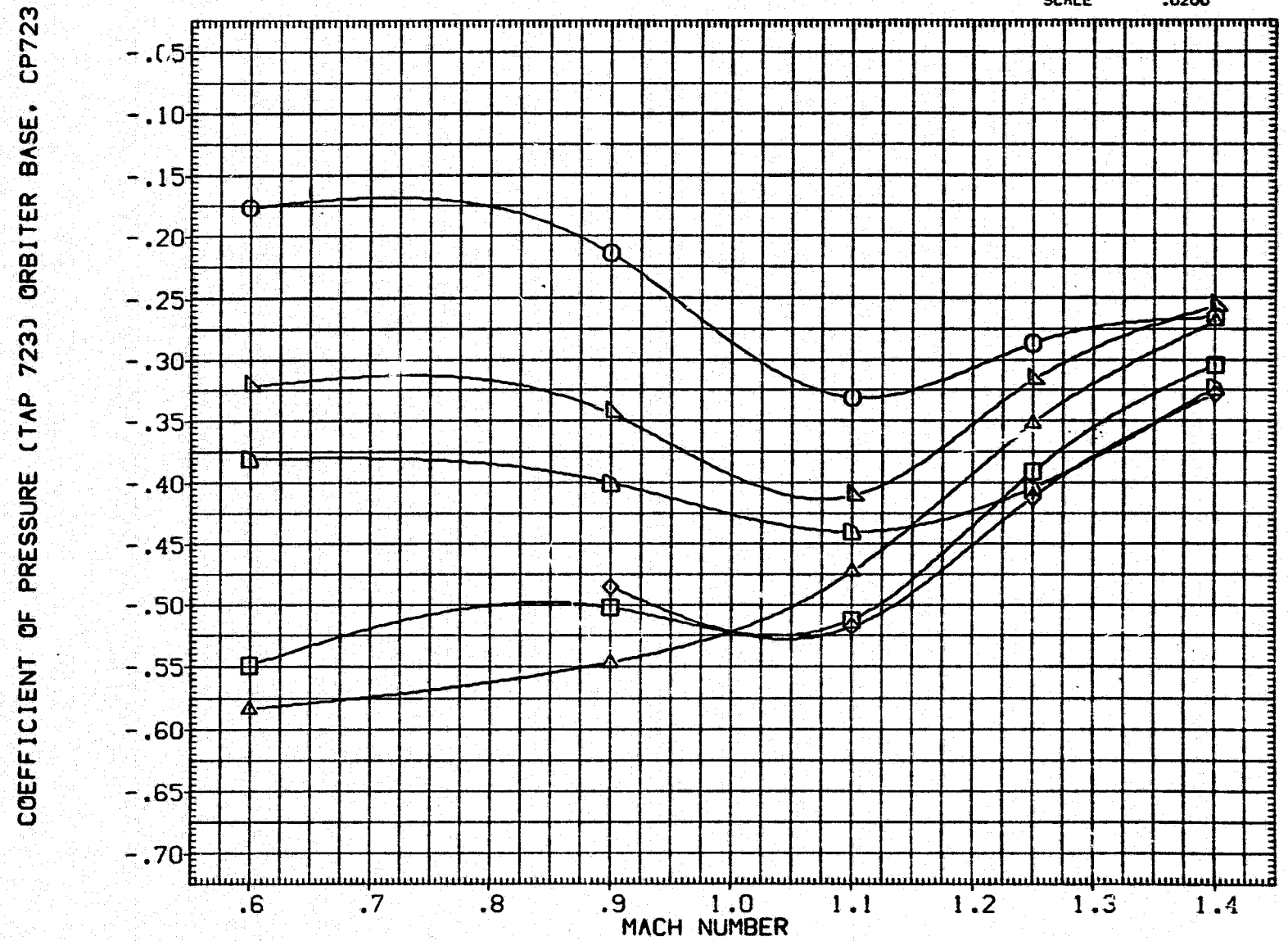



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4N28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (GE4N20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (GE4N16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (GE4N11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (GE4NB0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (GE4NB5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

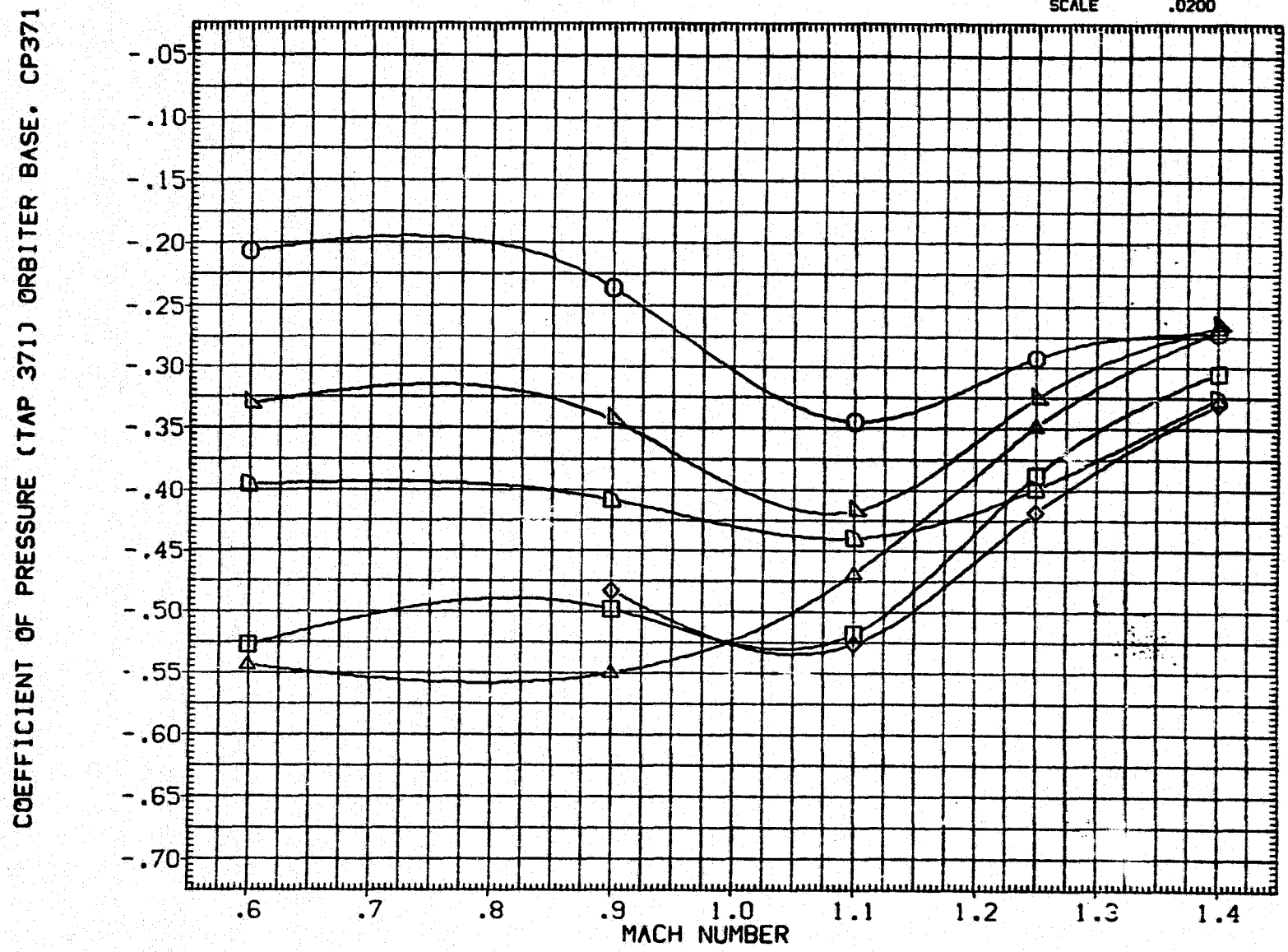



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4N28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (GE4N20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (GE4N16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (GE4N11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (GE4N80) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (GE4N85) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

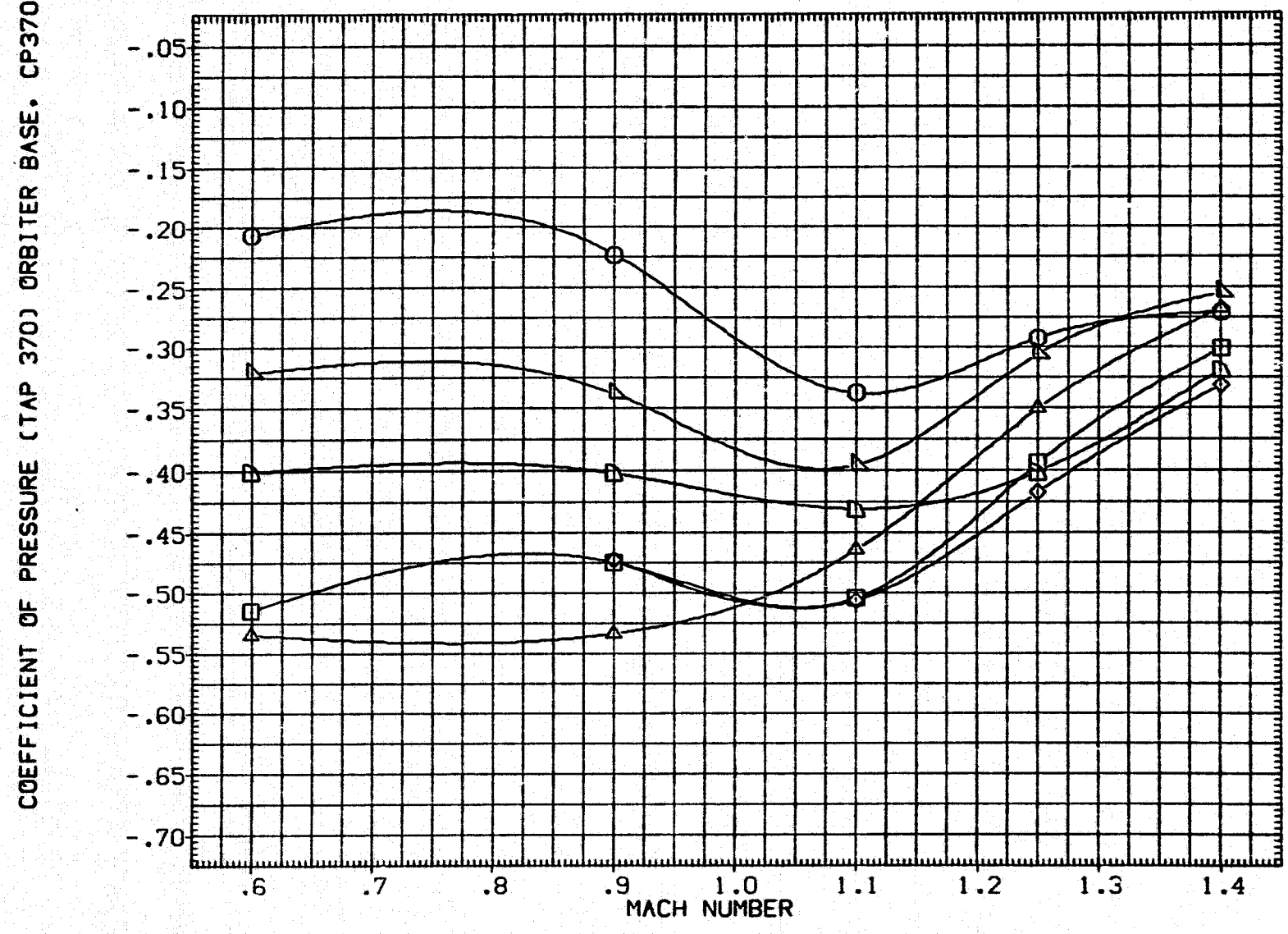



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (GE4N28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | -4.000 |
| (GE4N20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | -4.000 |
| (GE4N16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | -4.000 |
| (GE4N11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | -4.000 |
| (GE4NB0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | -4.000 |
| (GE4NB5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | -4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

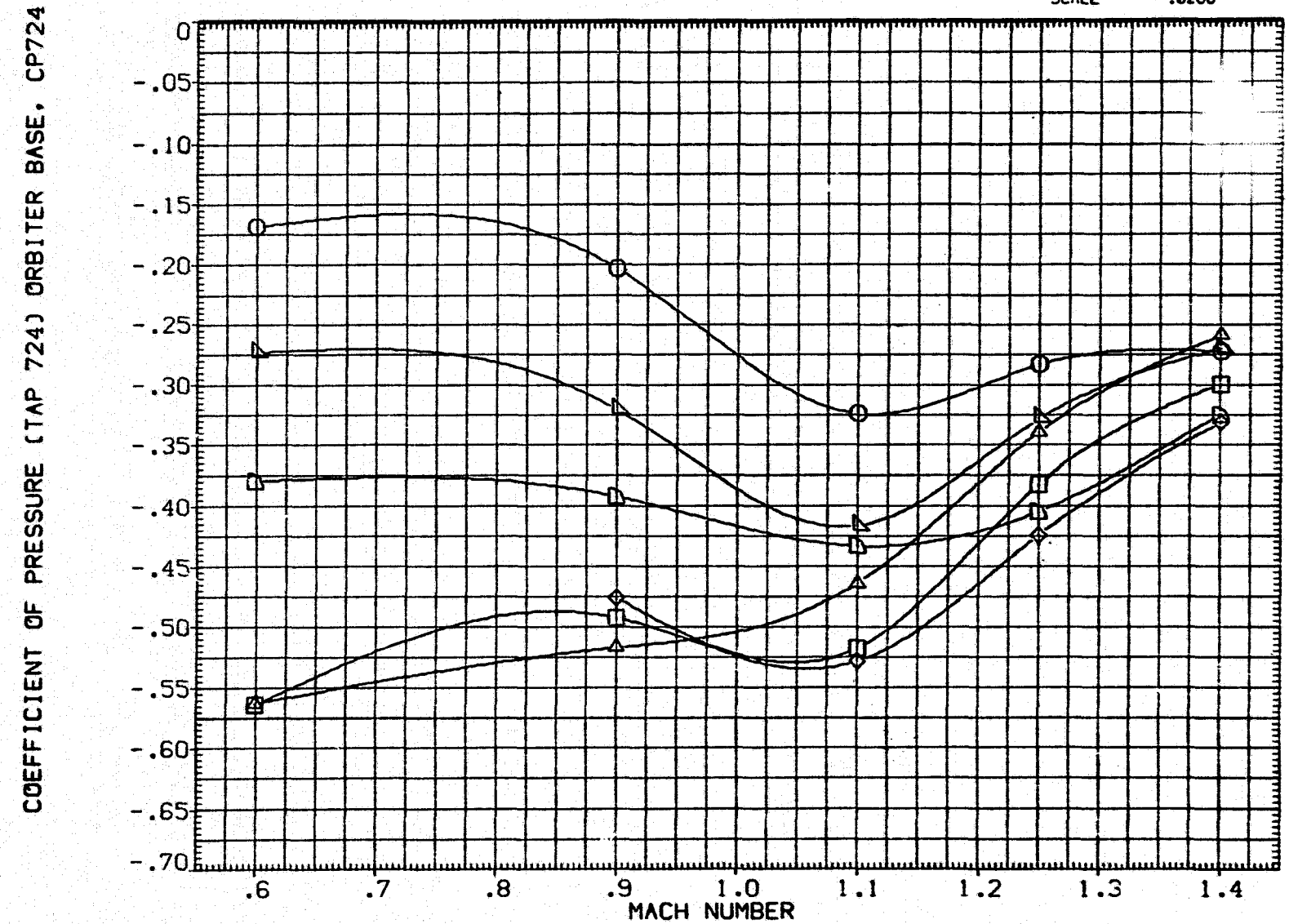



FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

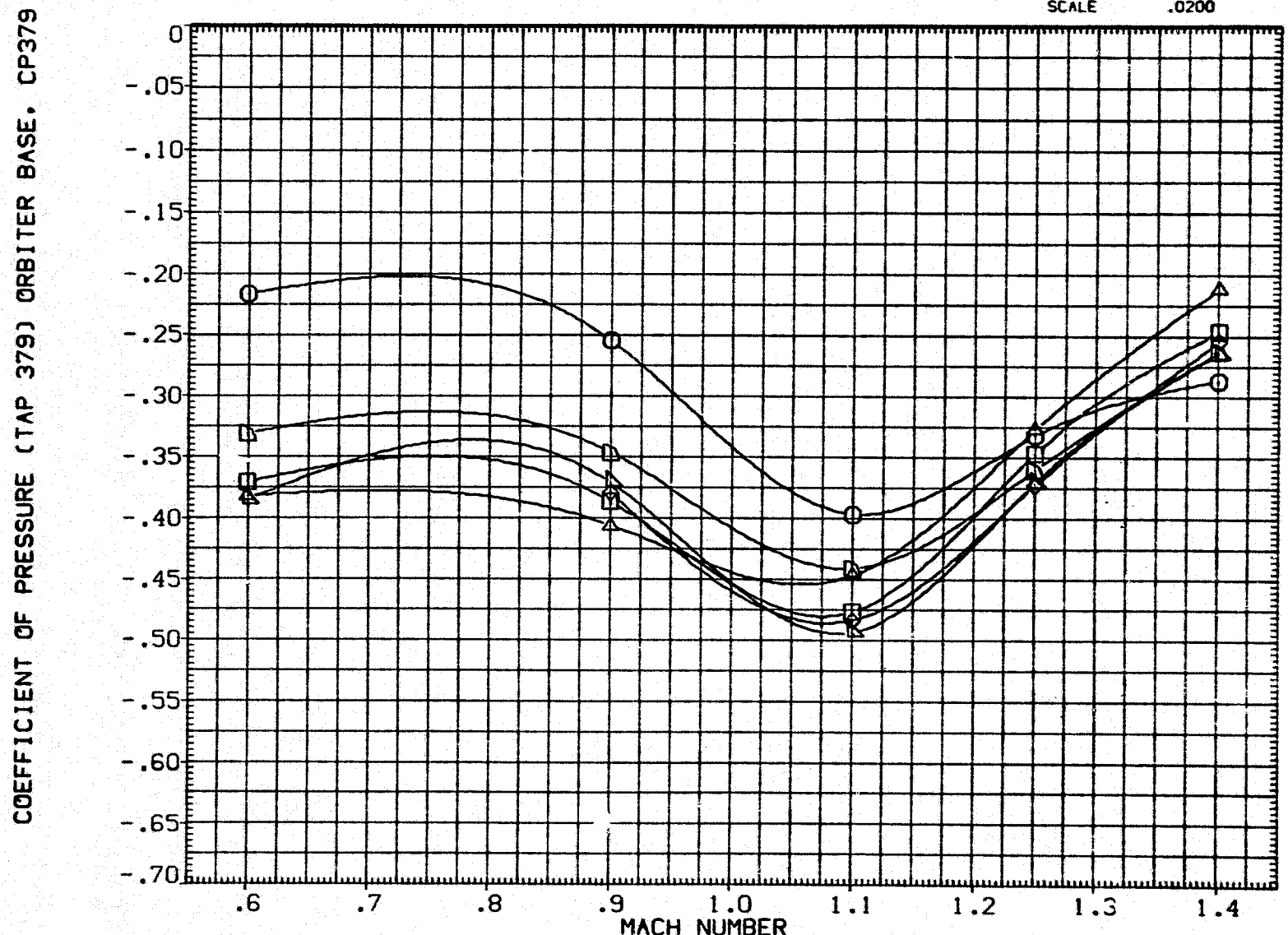



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (AE4028) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE40B0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE40B5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

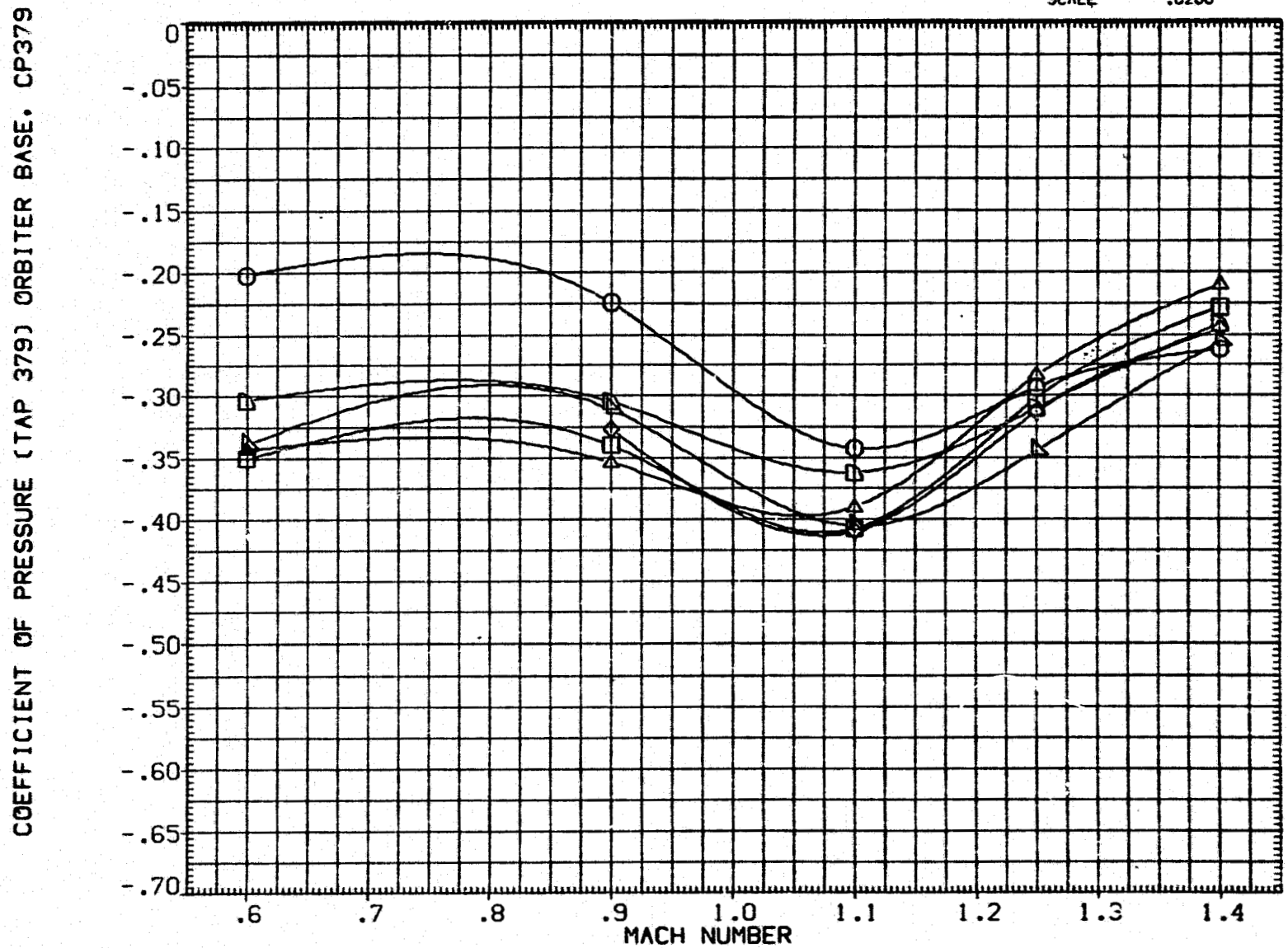



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | □ | ARC 11-023 IA8D OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | ◇ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | △ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ▷ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ○ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▽ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

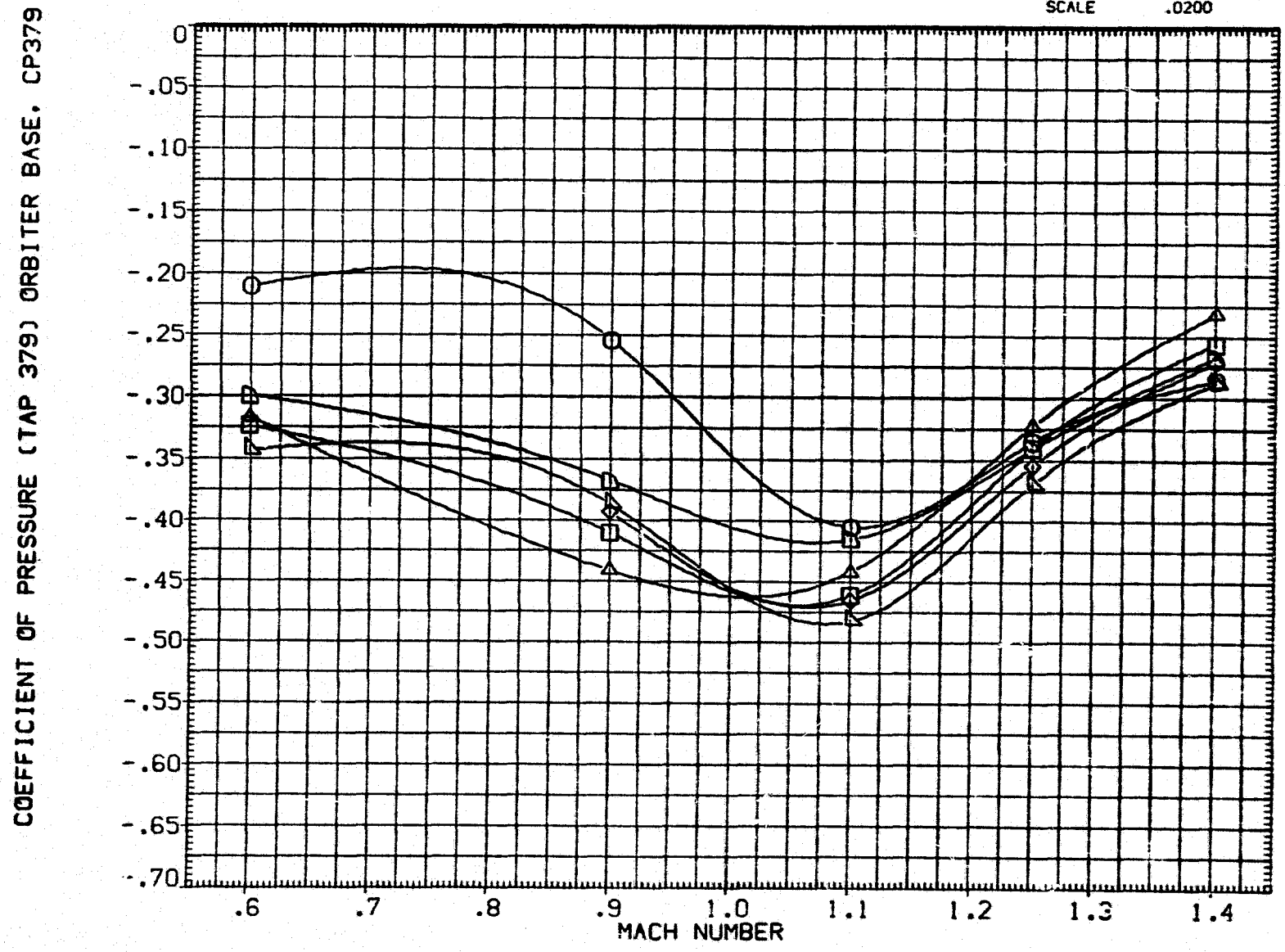



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

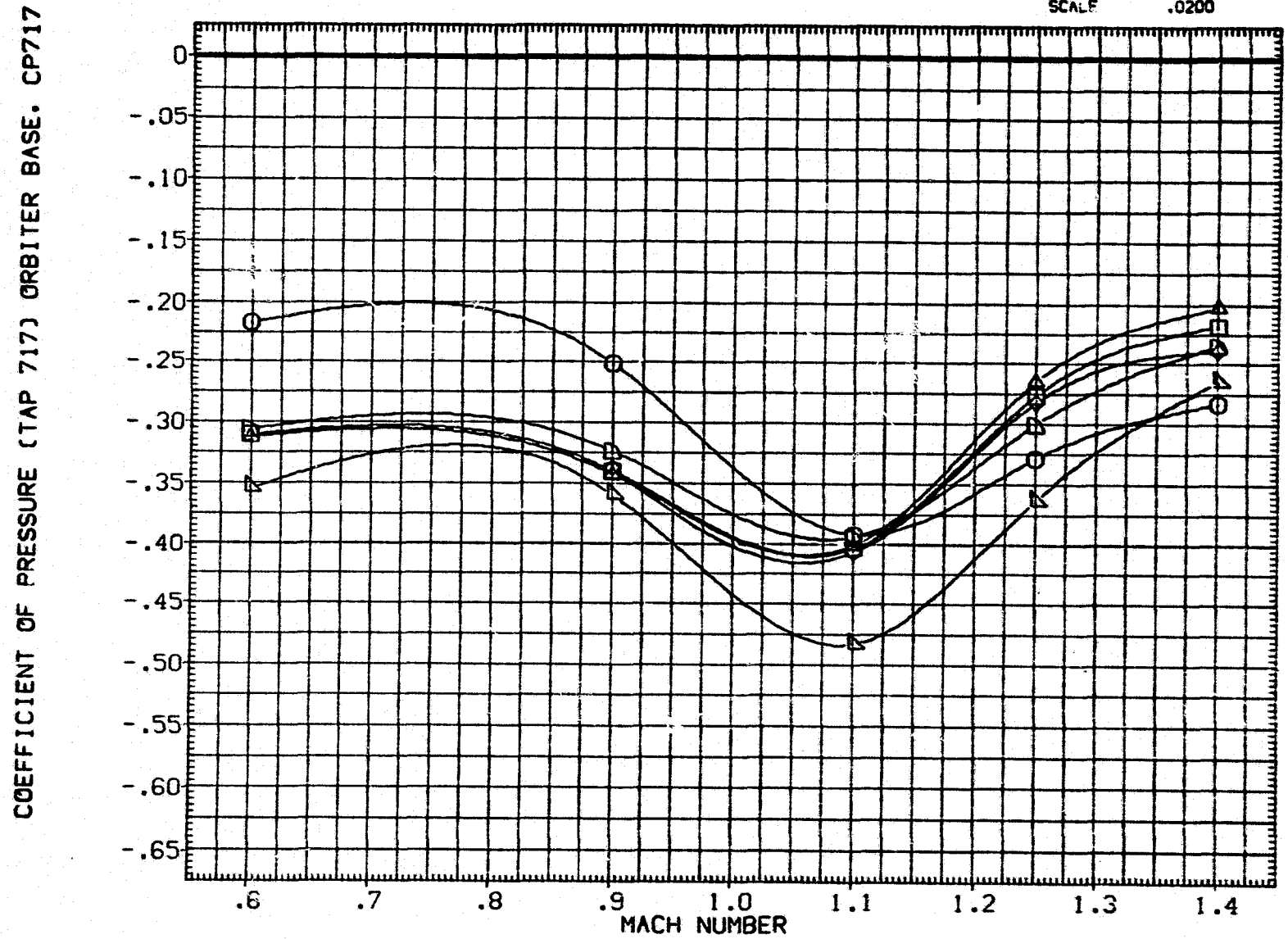



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

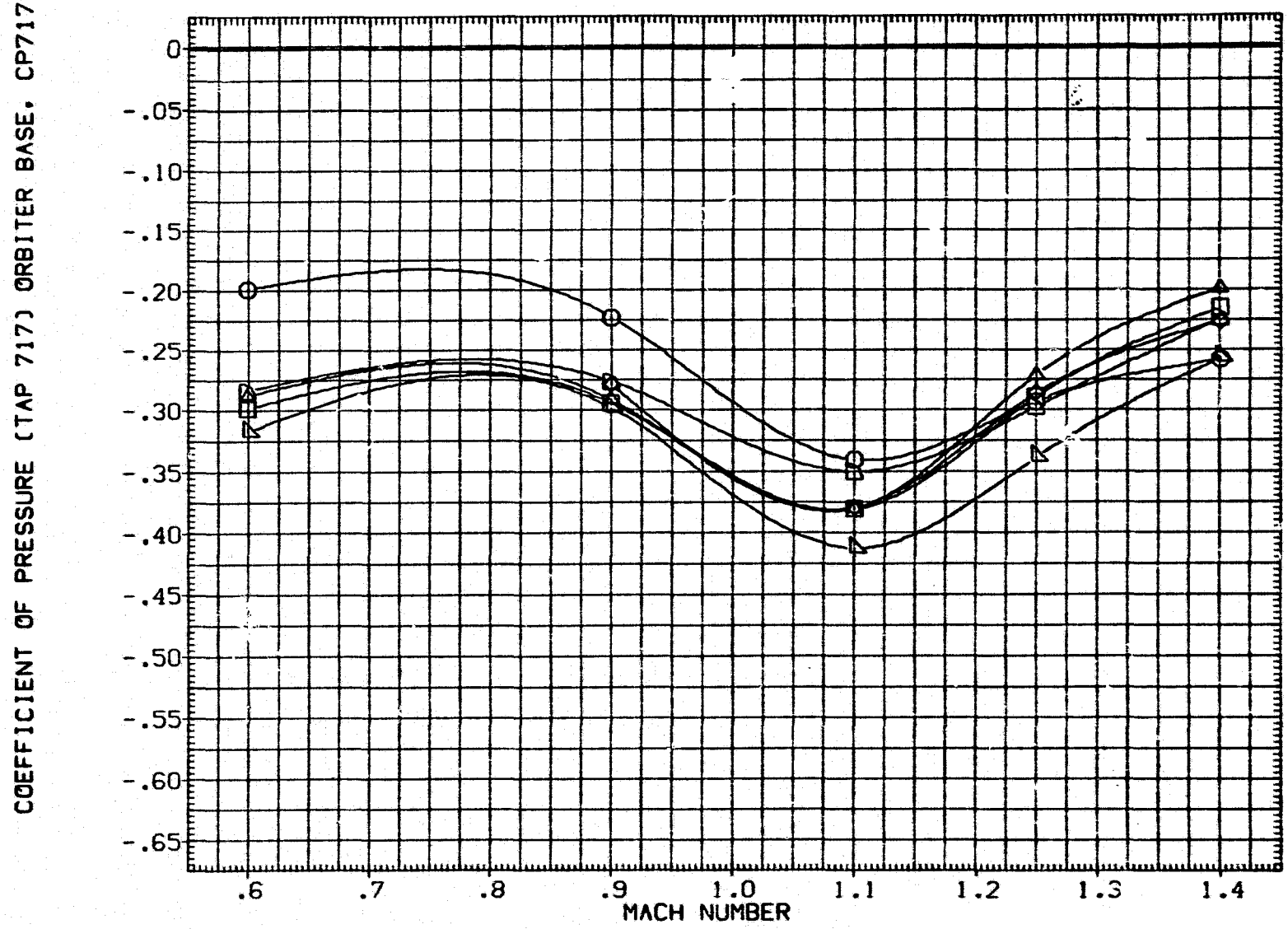



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

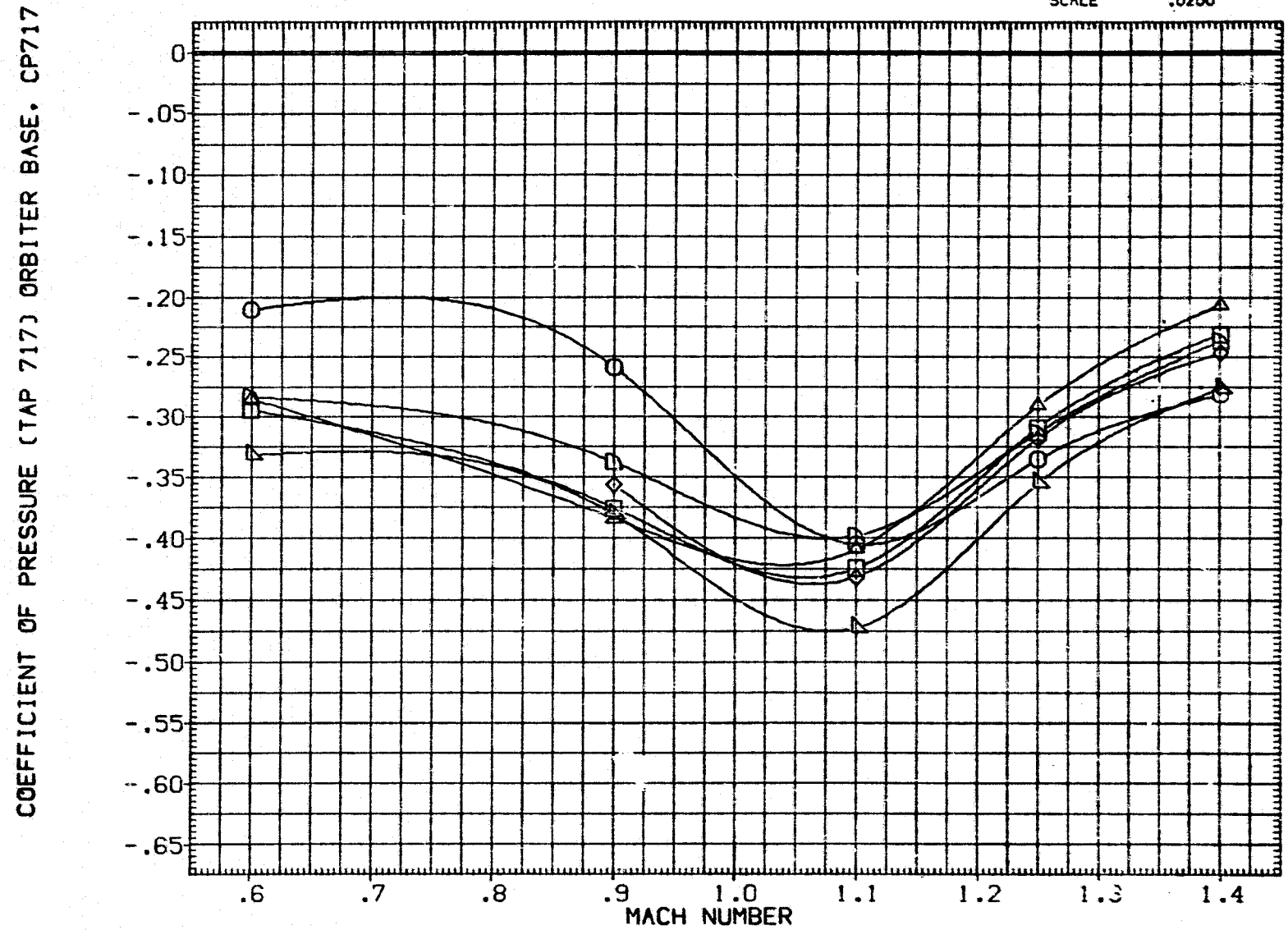



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

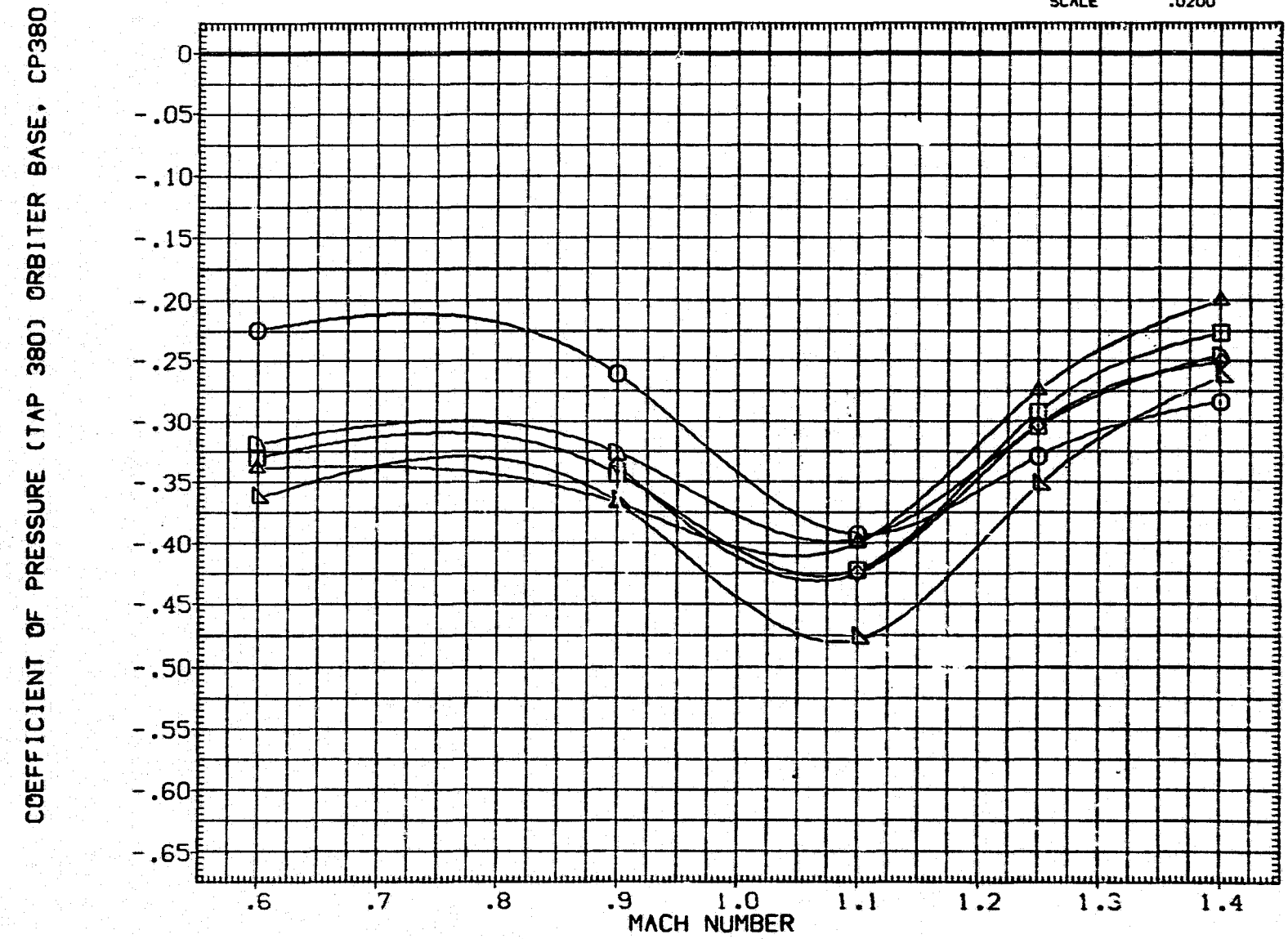



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (AE4028) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE40B0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE40B5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

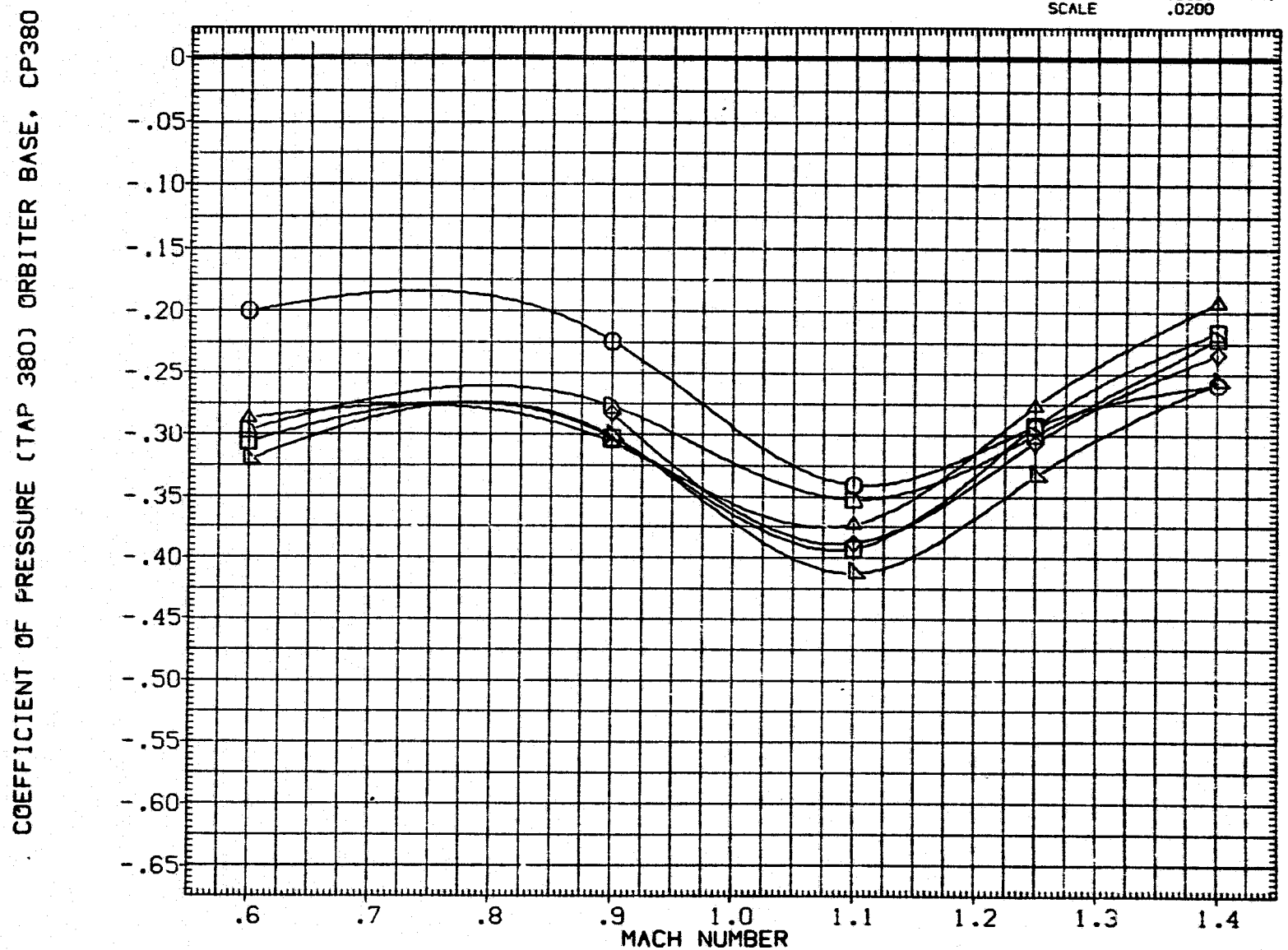



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ⊡ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

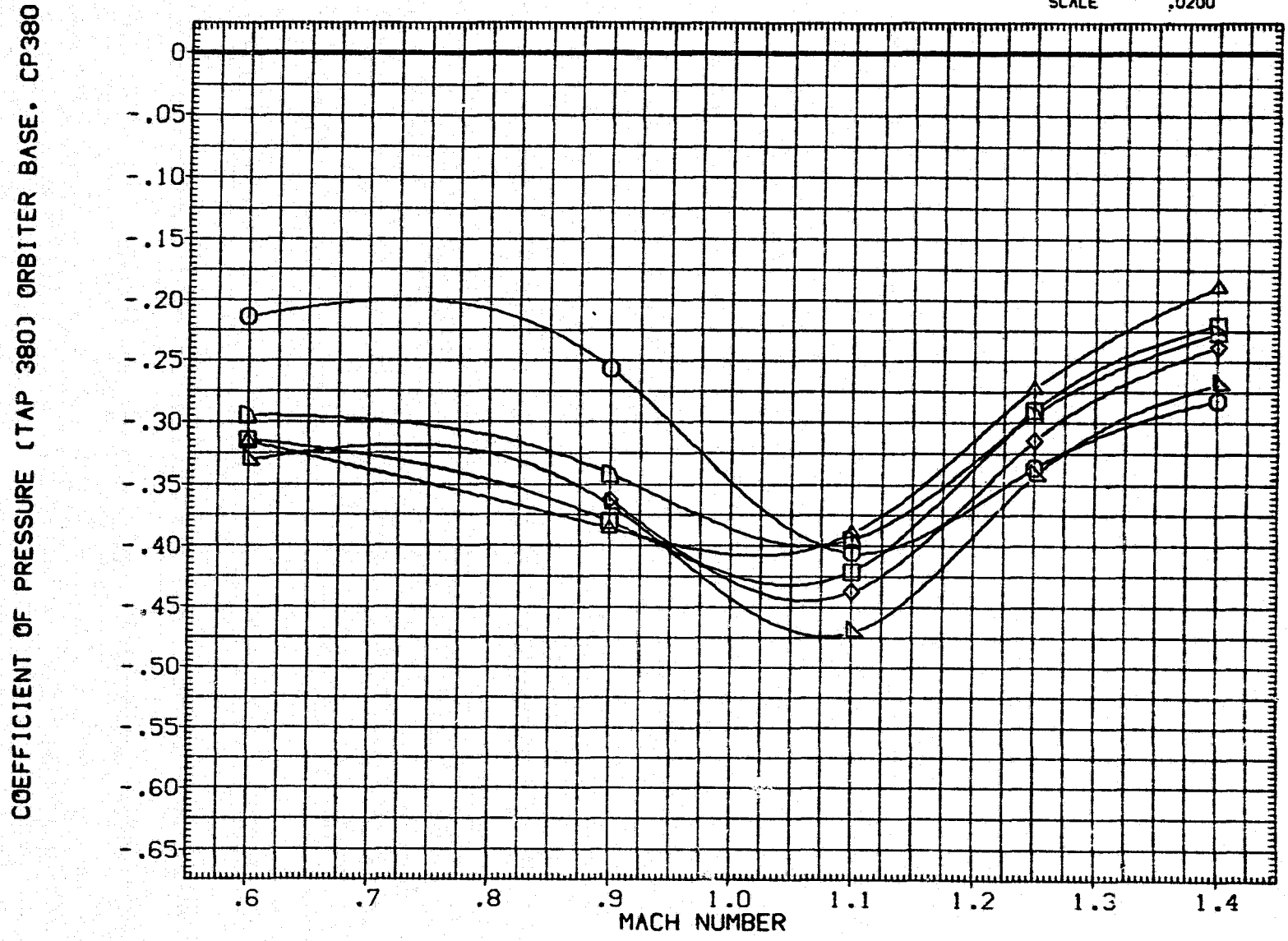



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (AE4028) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

REFERENCE INFORM-TION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

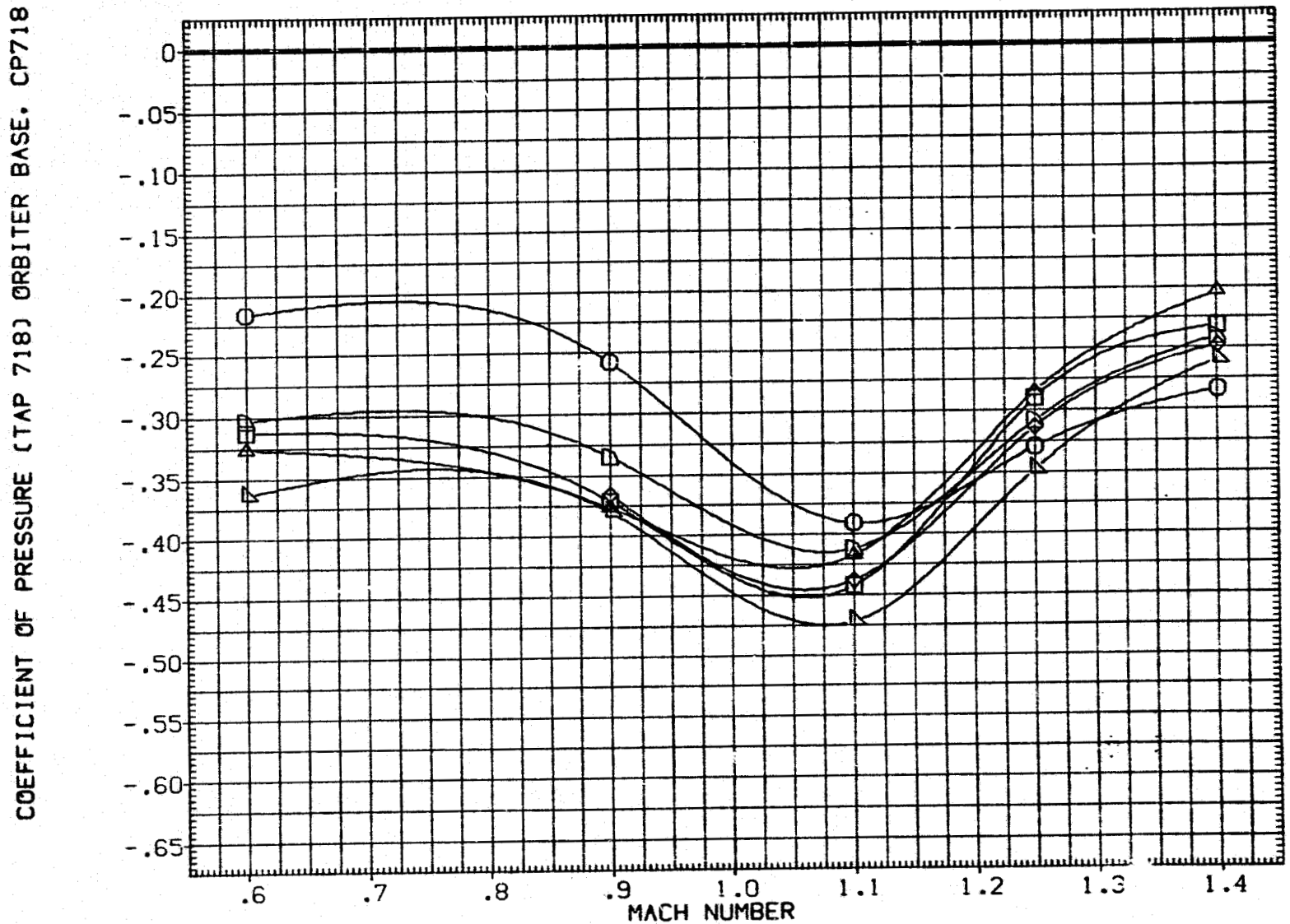



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | | APC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

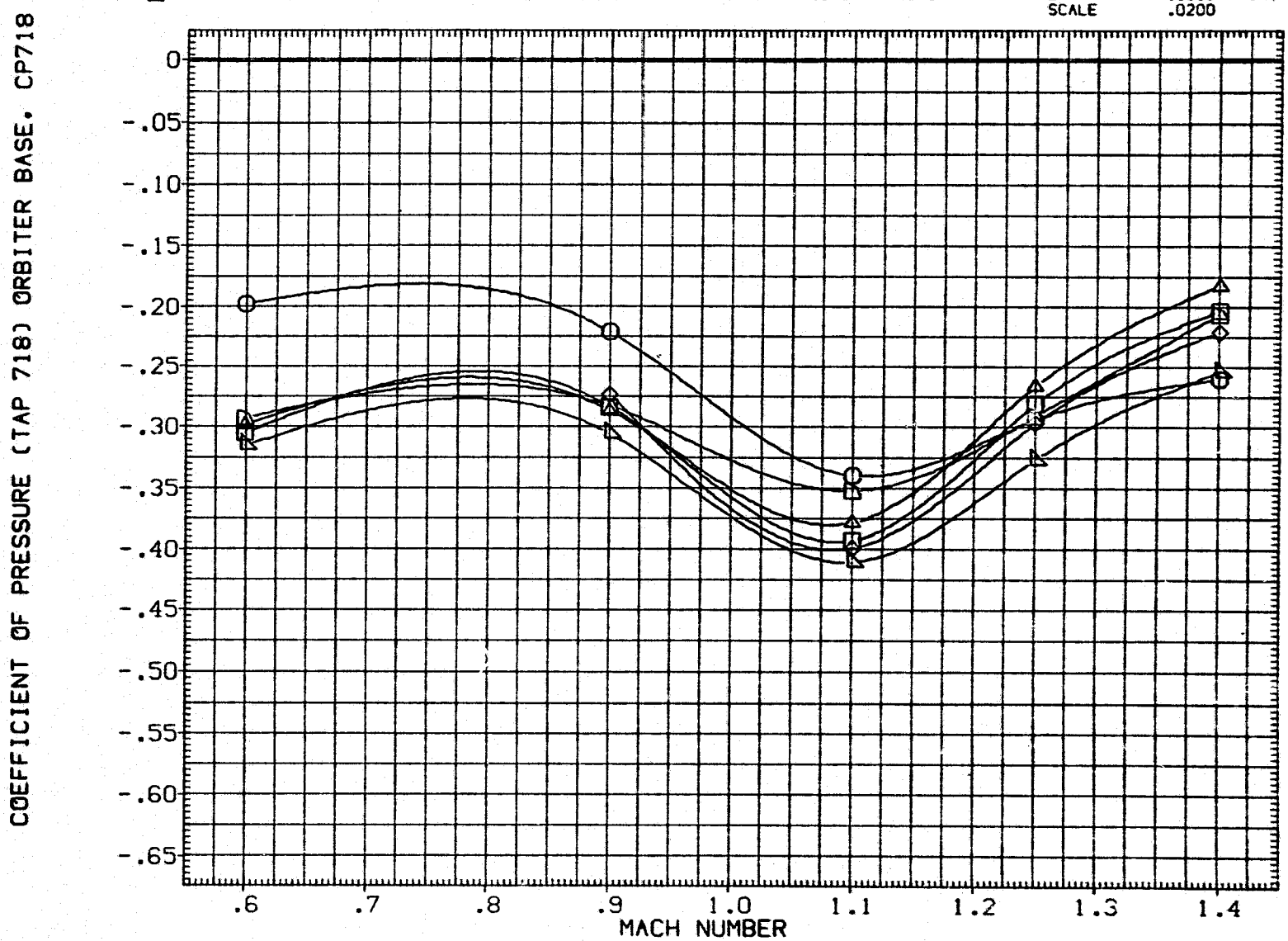



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

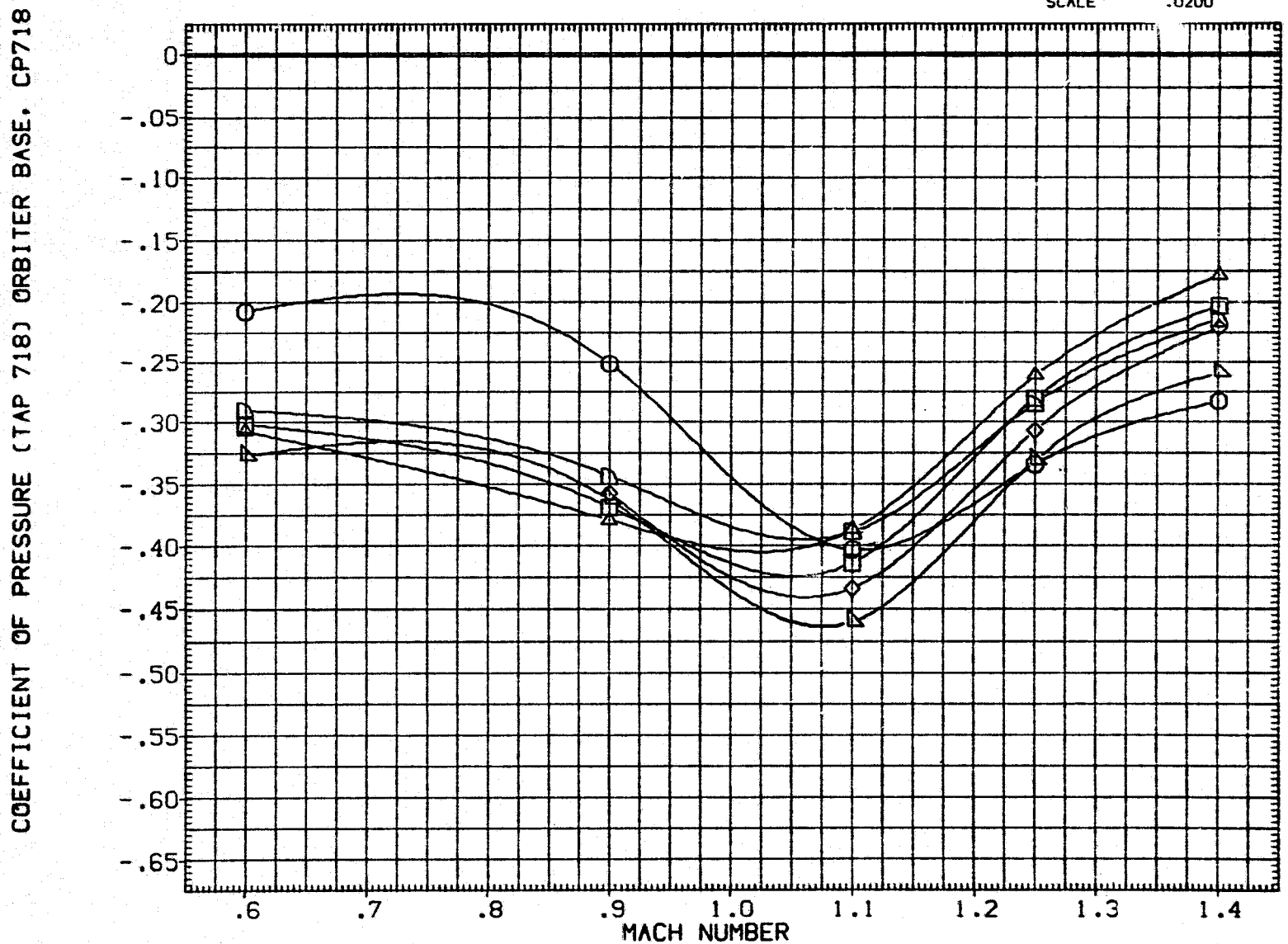



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .003 | .000 |
| (AE4016) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

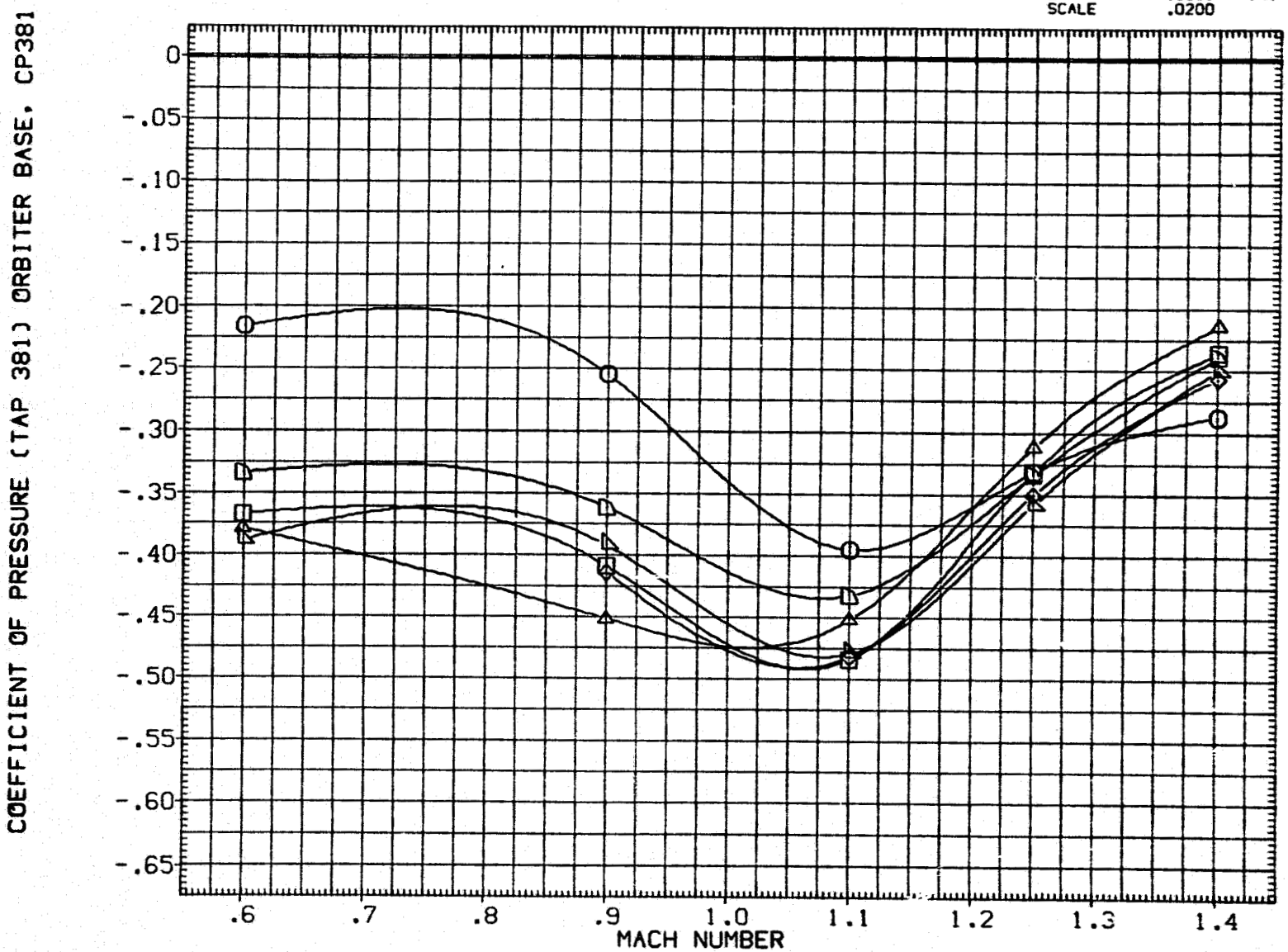



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE40B0) | | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE40B5) | | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

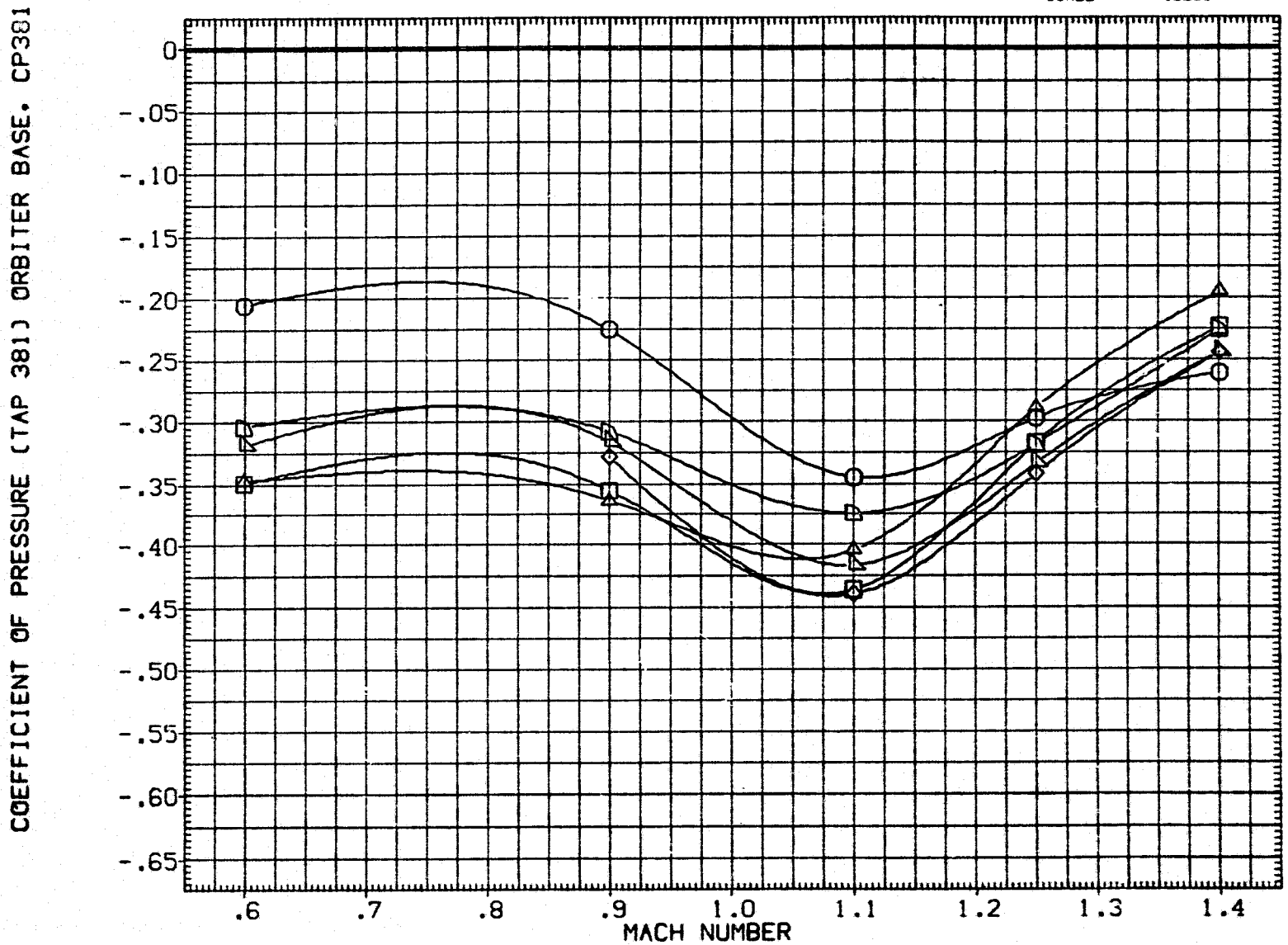



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE40B0) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE40B5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

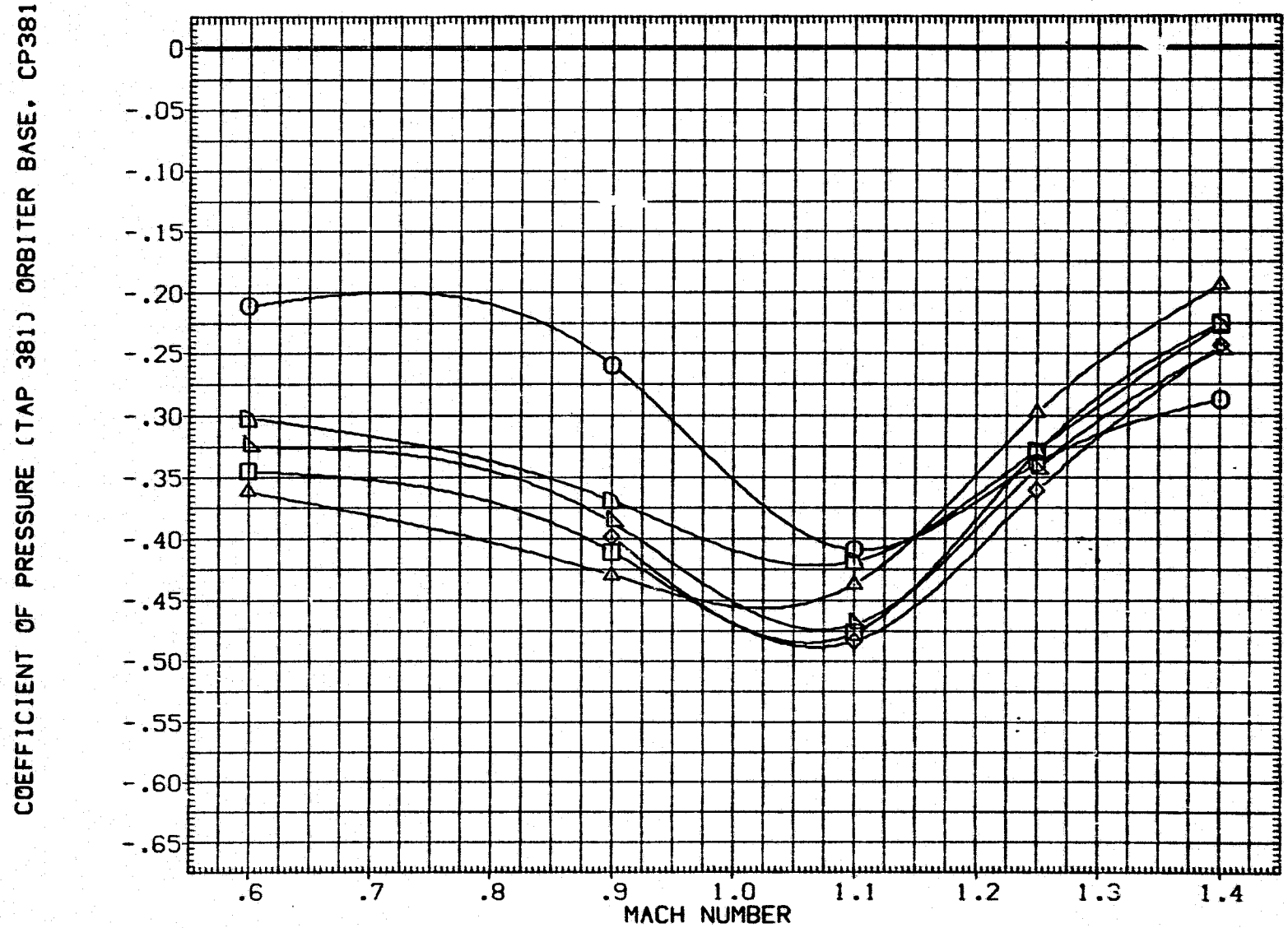



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

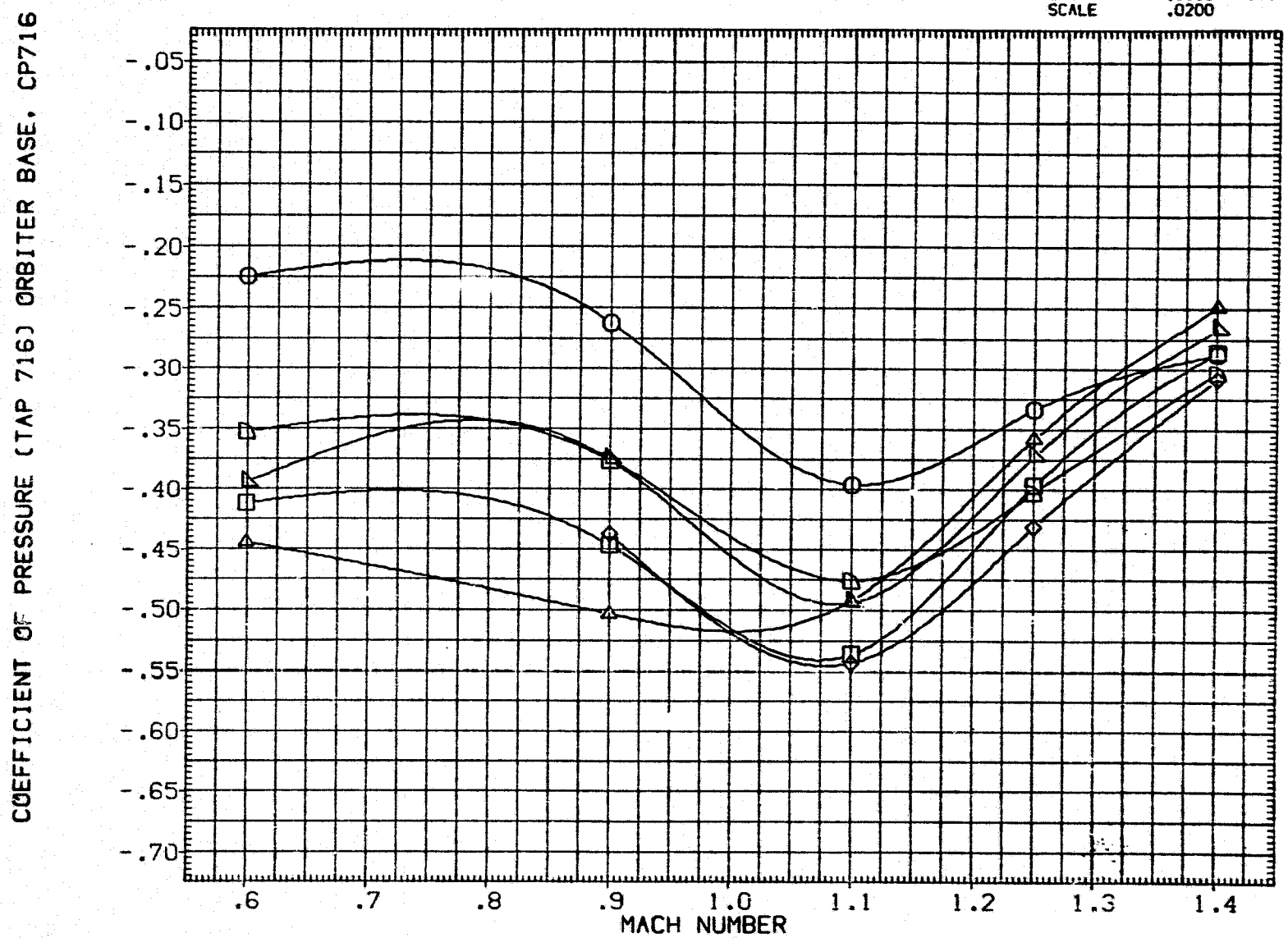



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

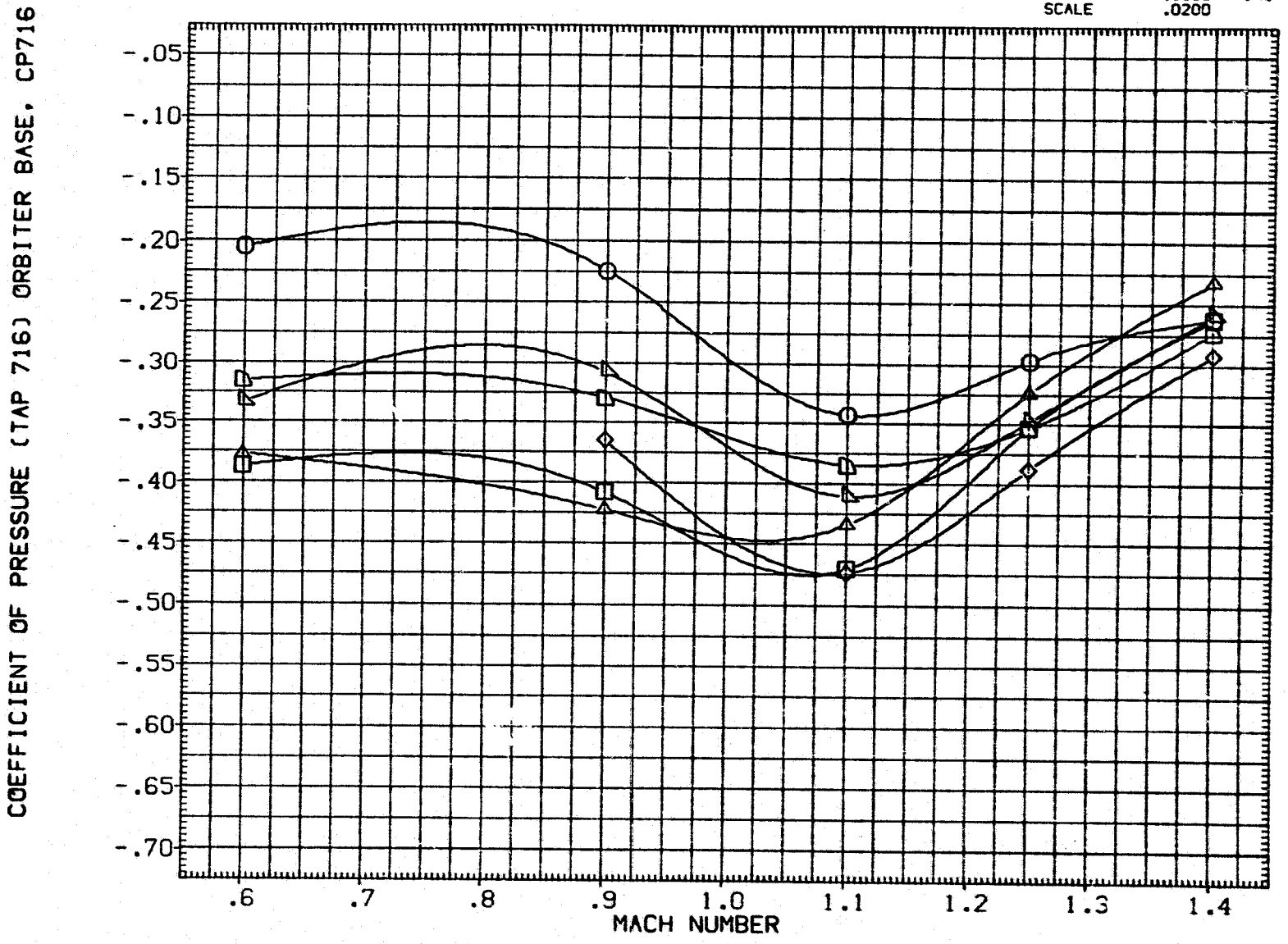



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2390.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

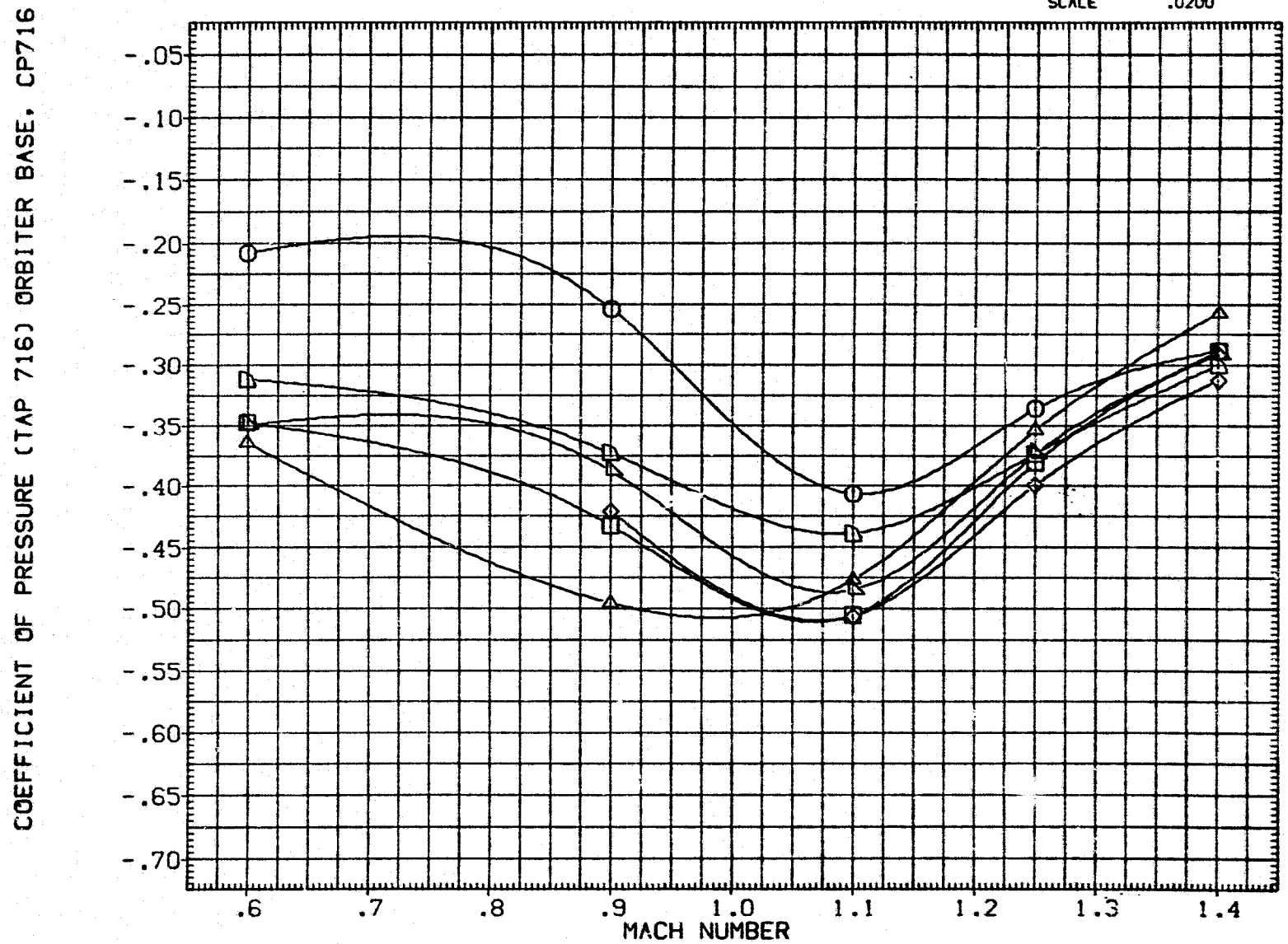



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

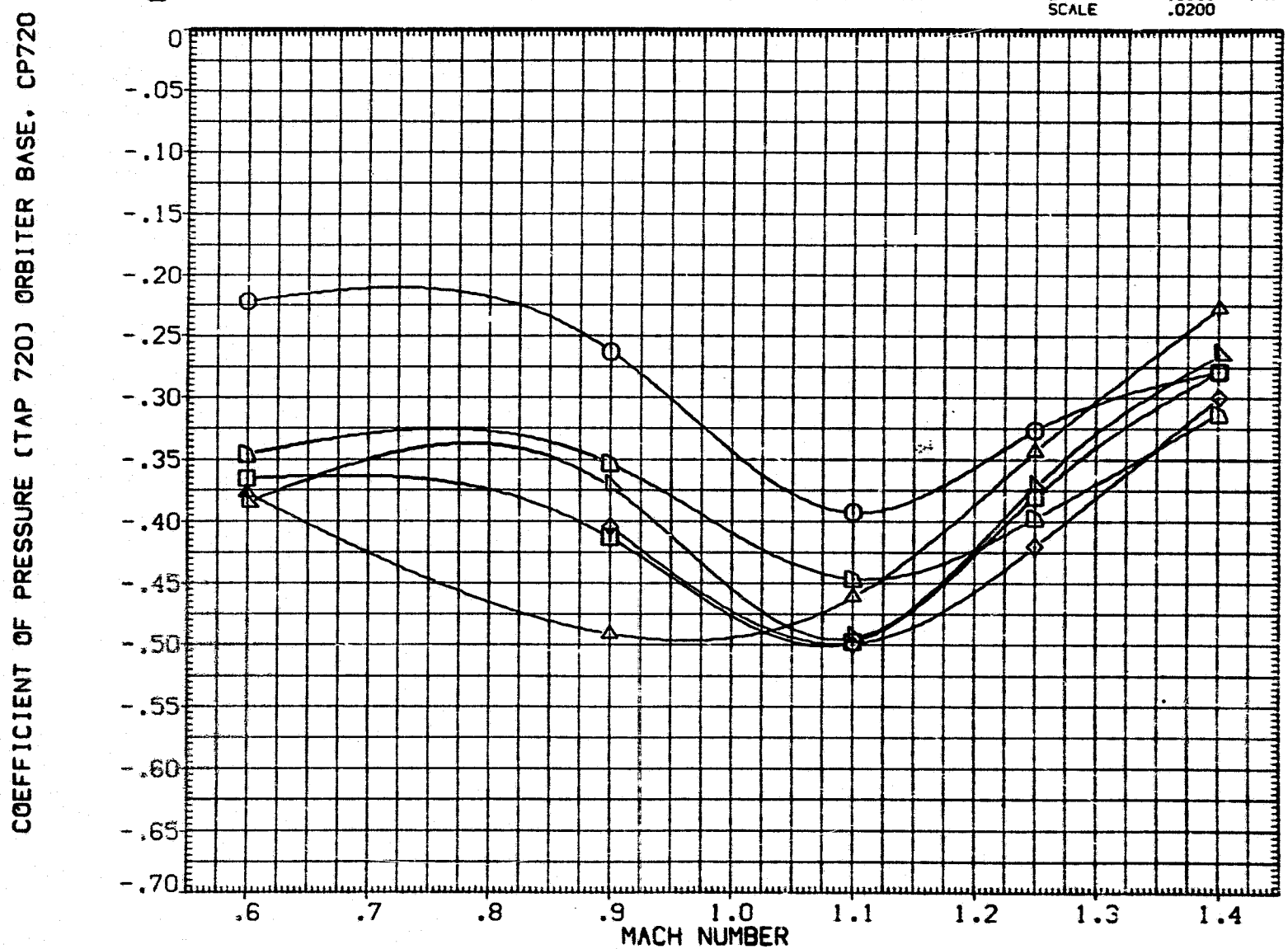



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (AE4028) | ARC 11-023 IA80 OTS (SPB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATIO | | |
|---|---|---|
| SREF | 2690.0000 | SQ FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

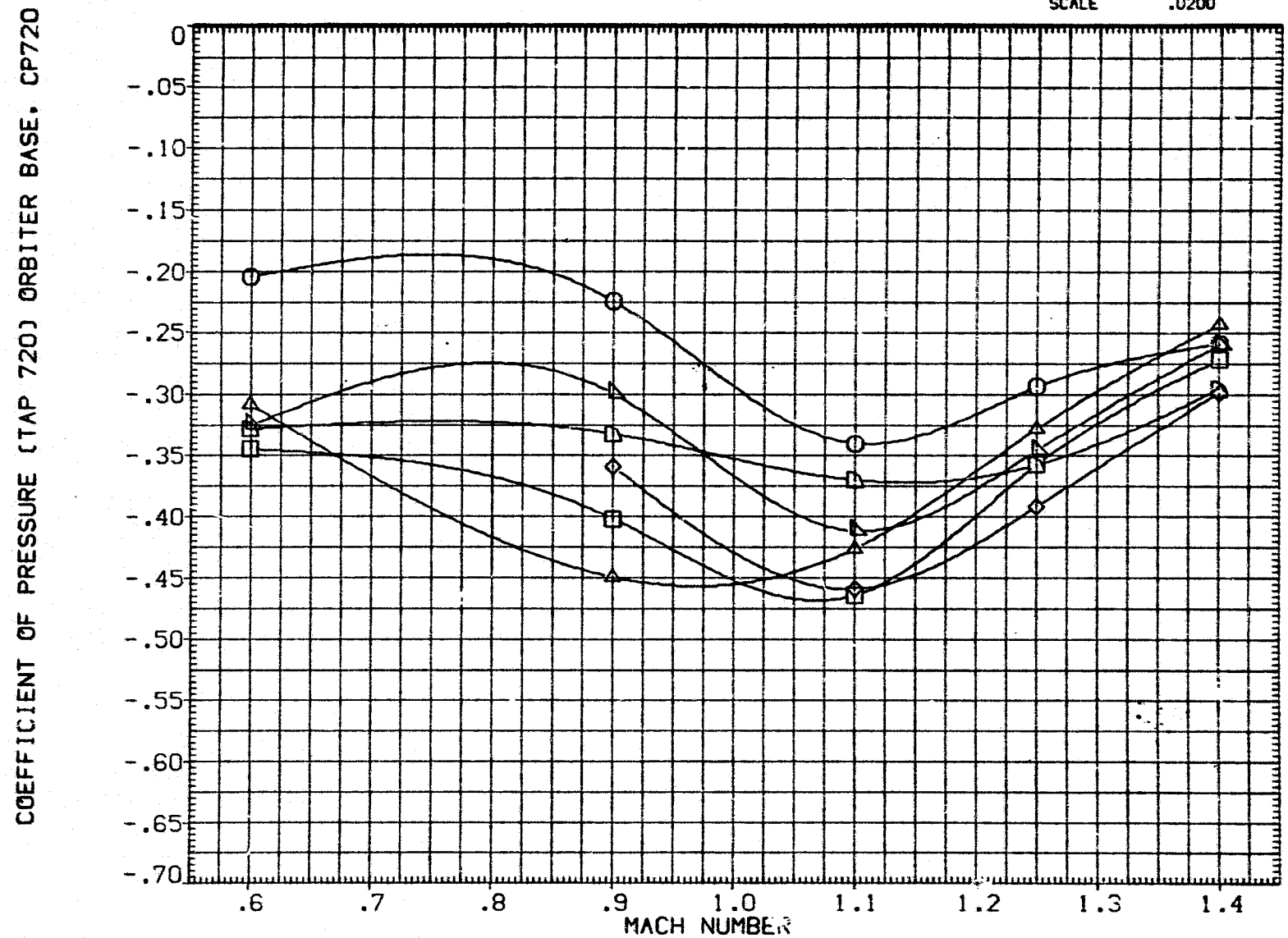



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (AE4028) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

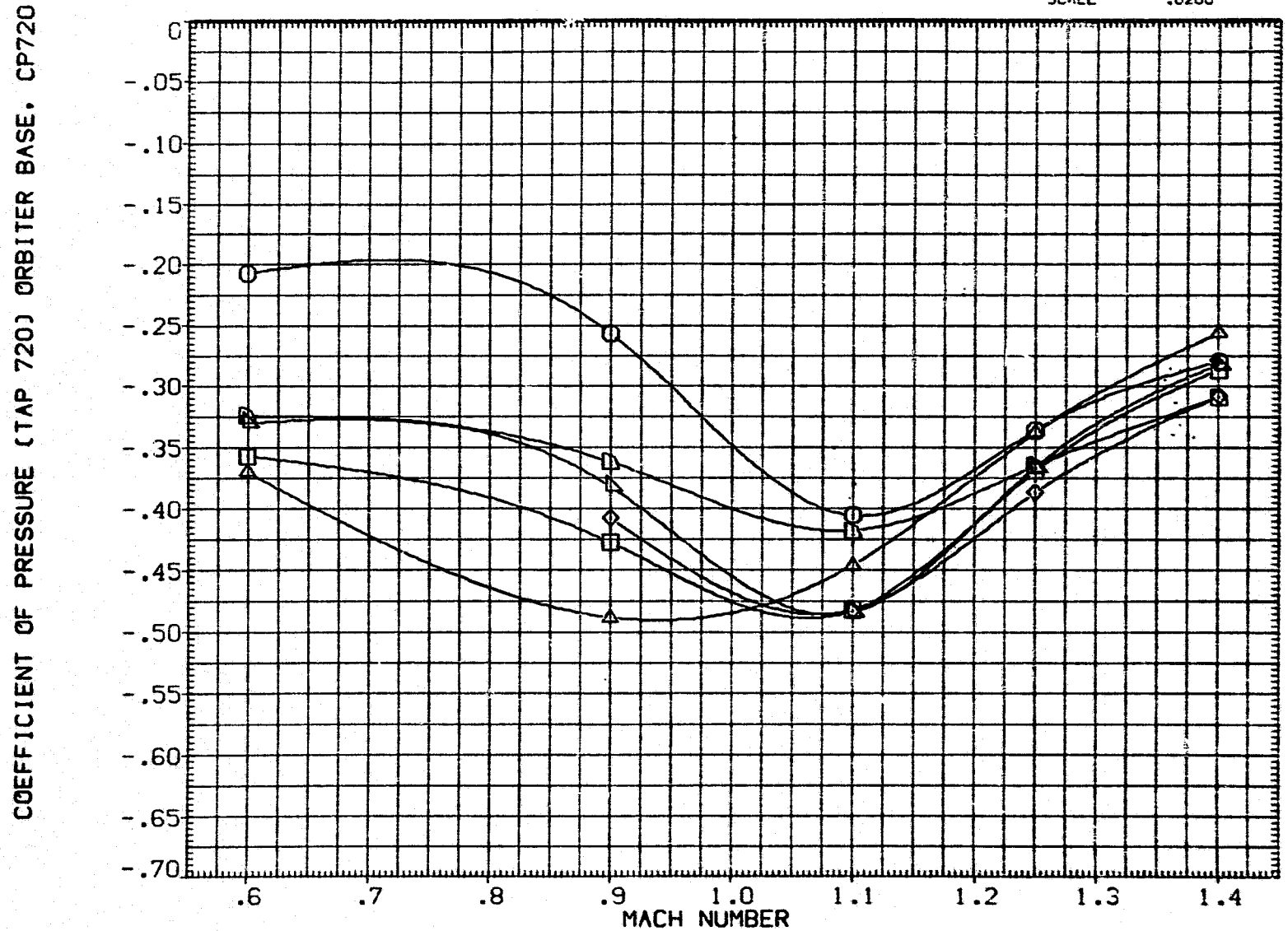



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

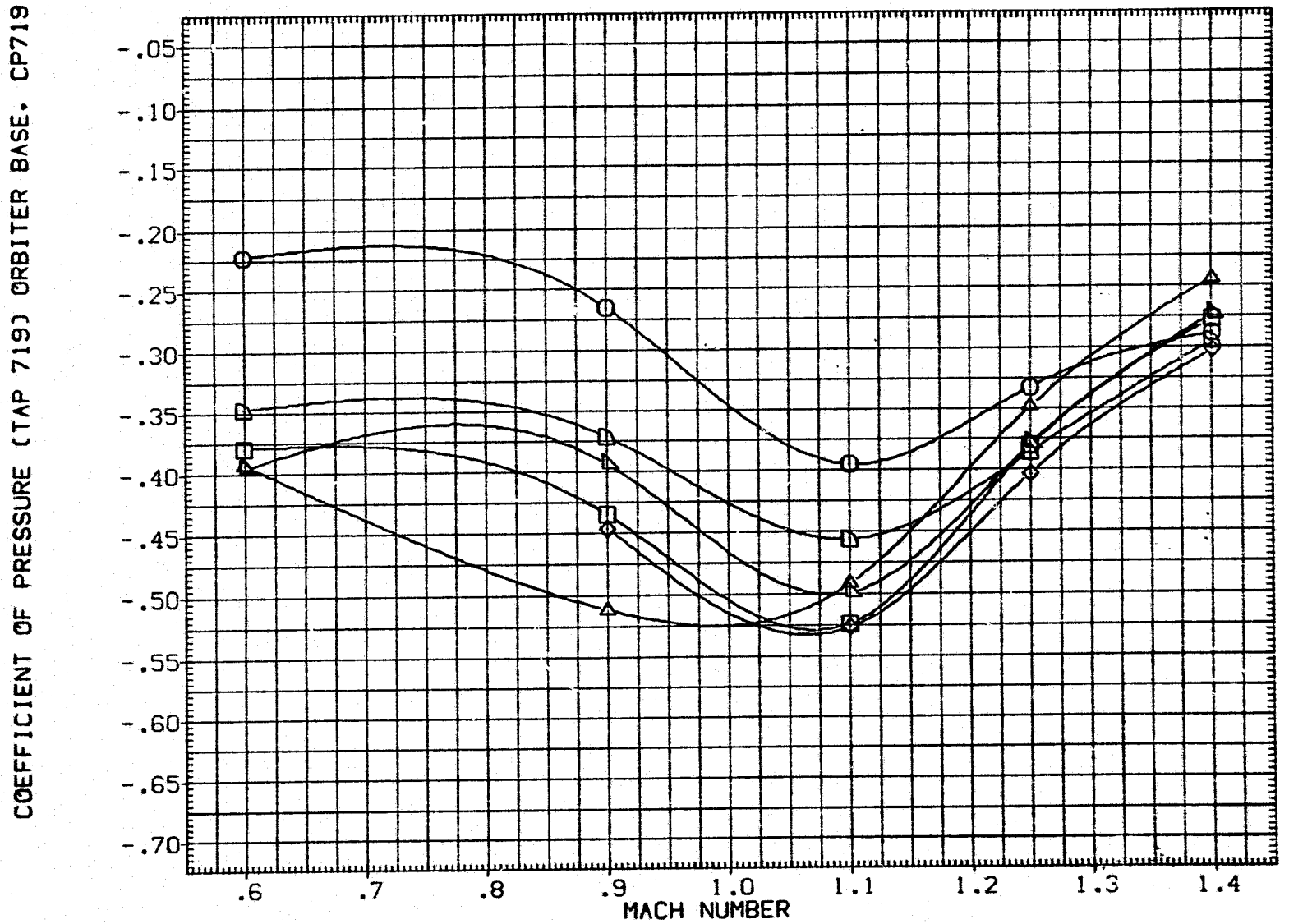



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

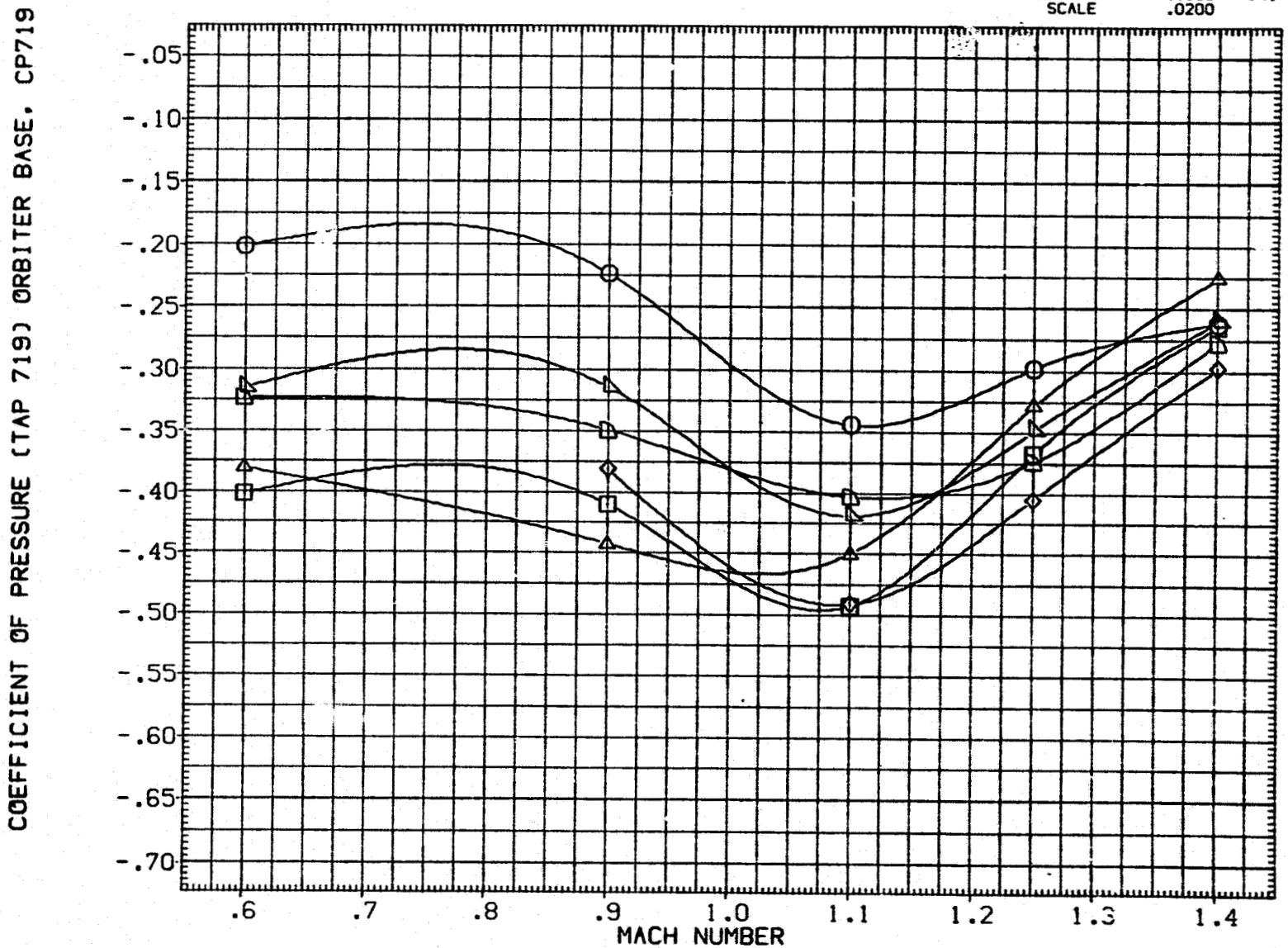



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

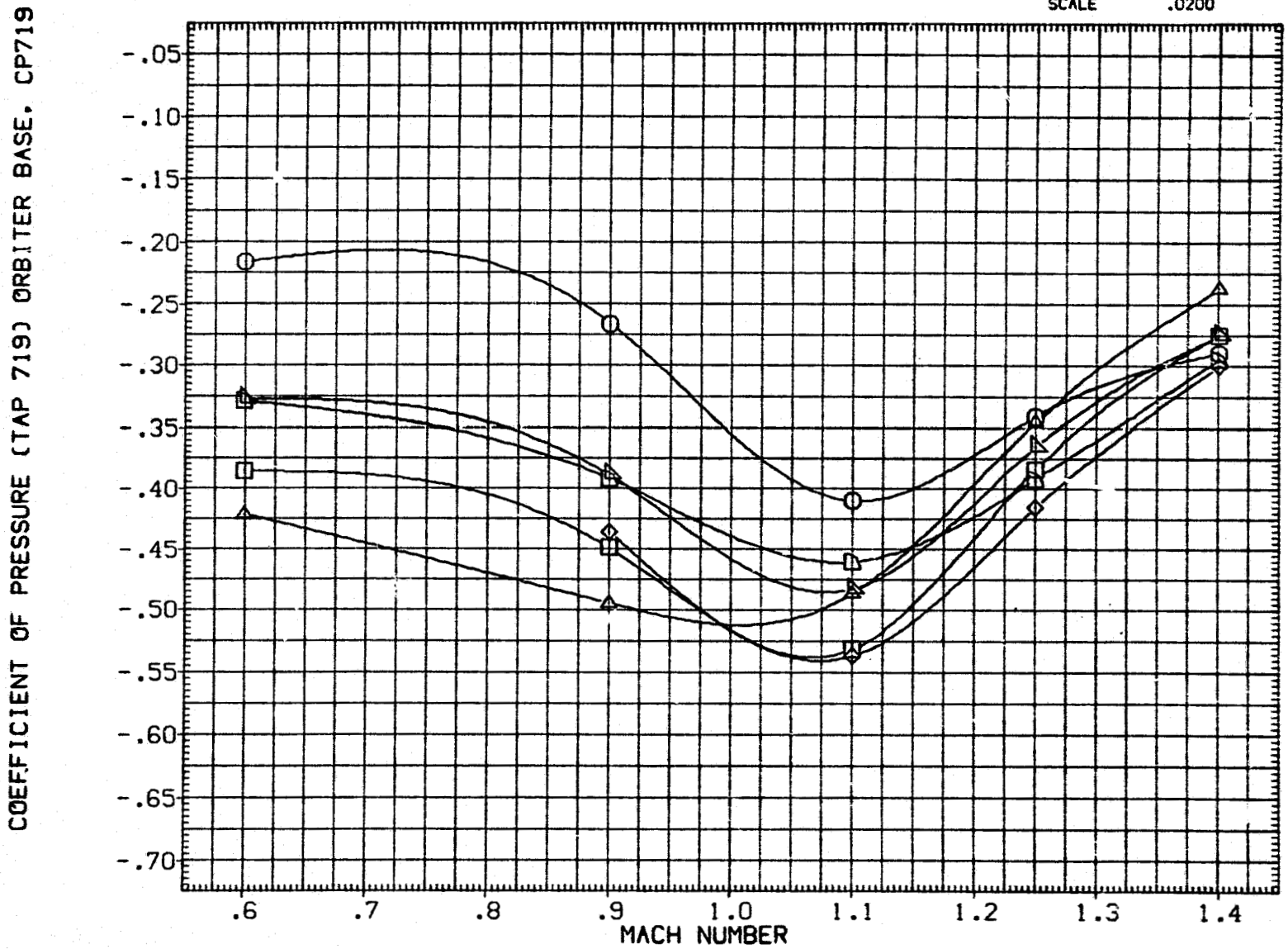



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

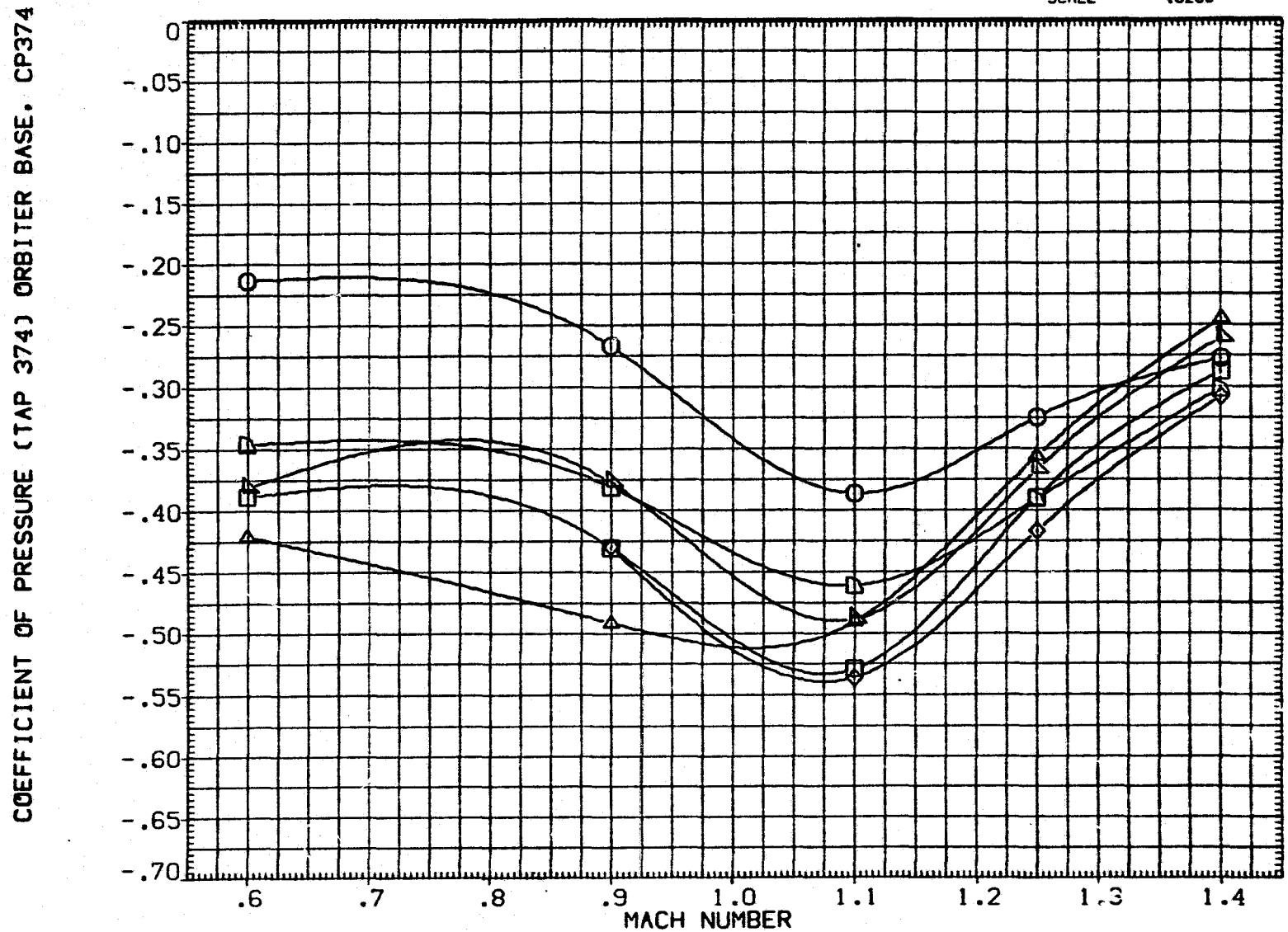



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

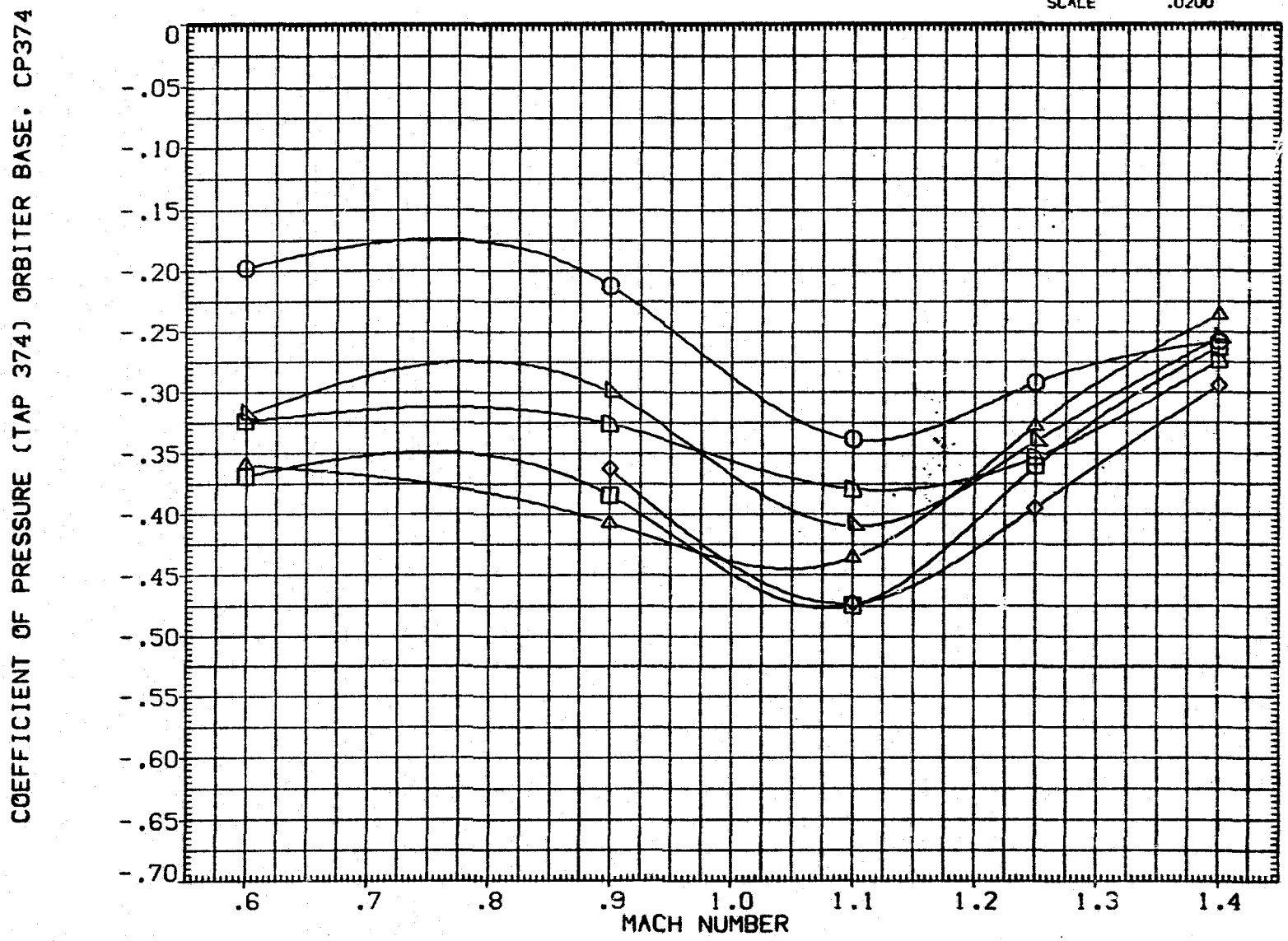



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE40B0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE40B5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

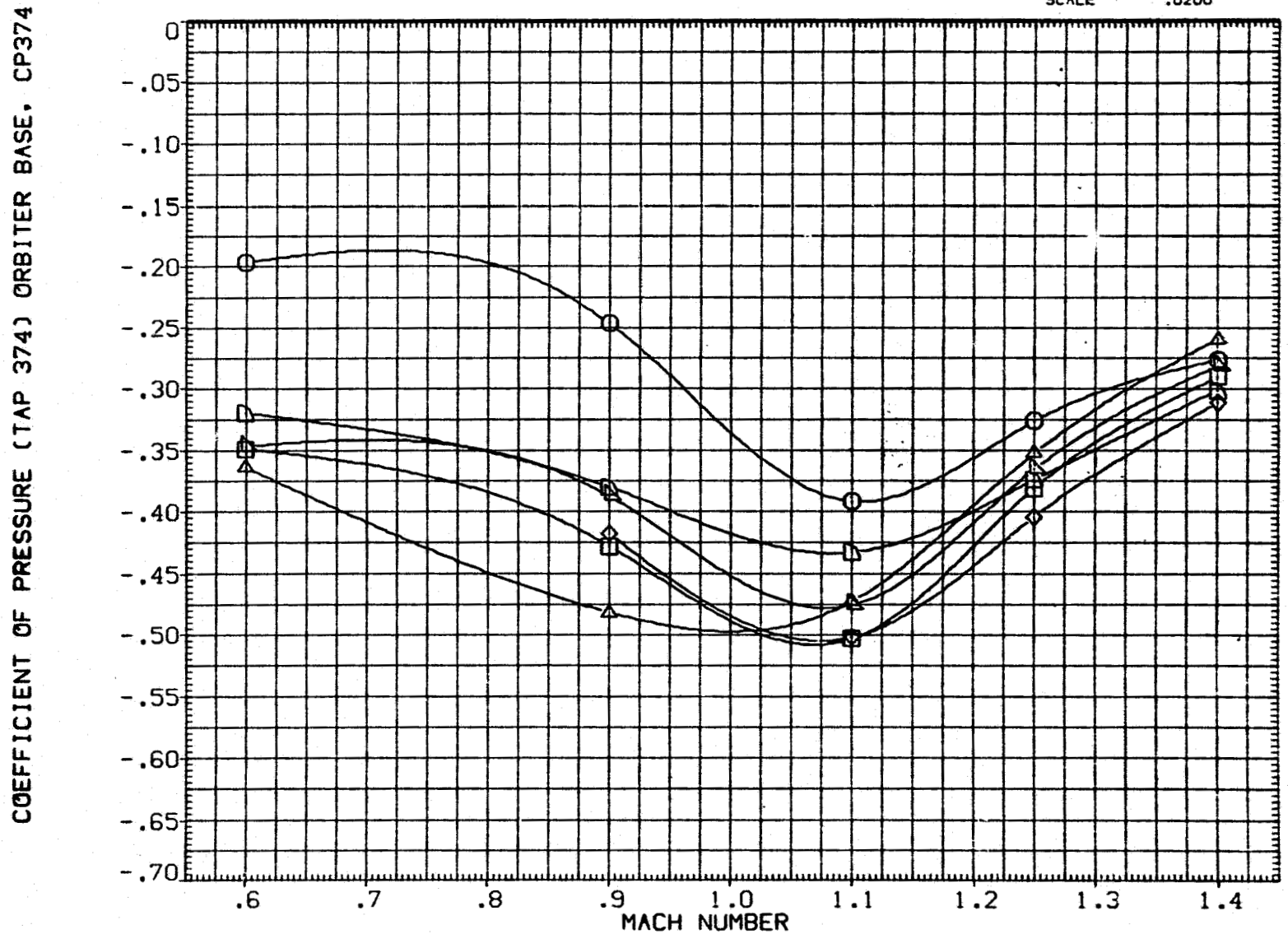



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

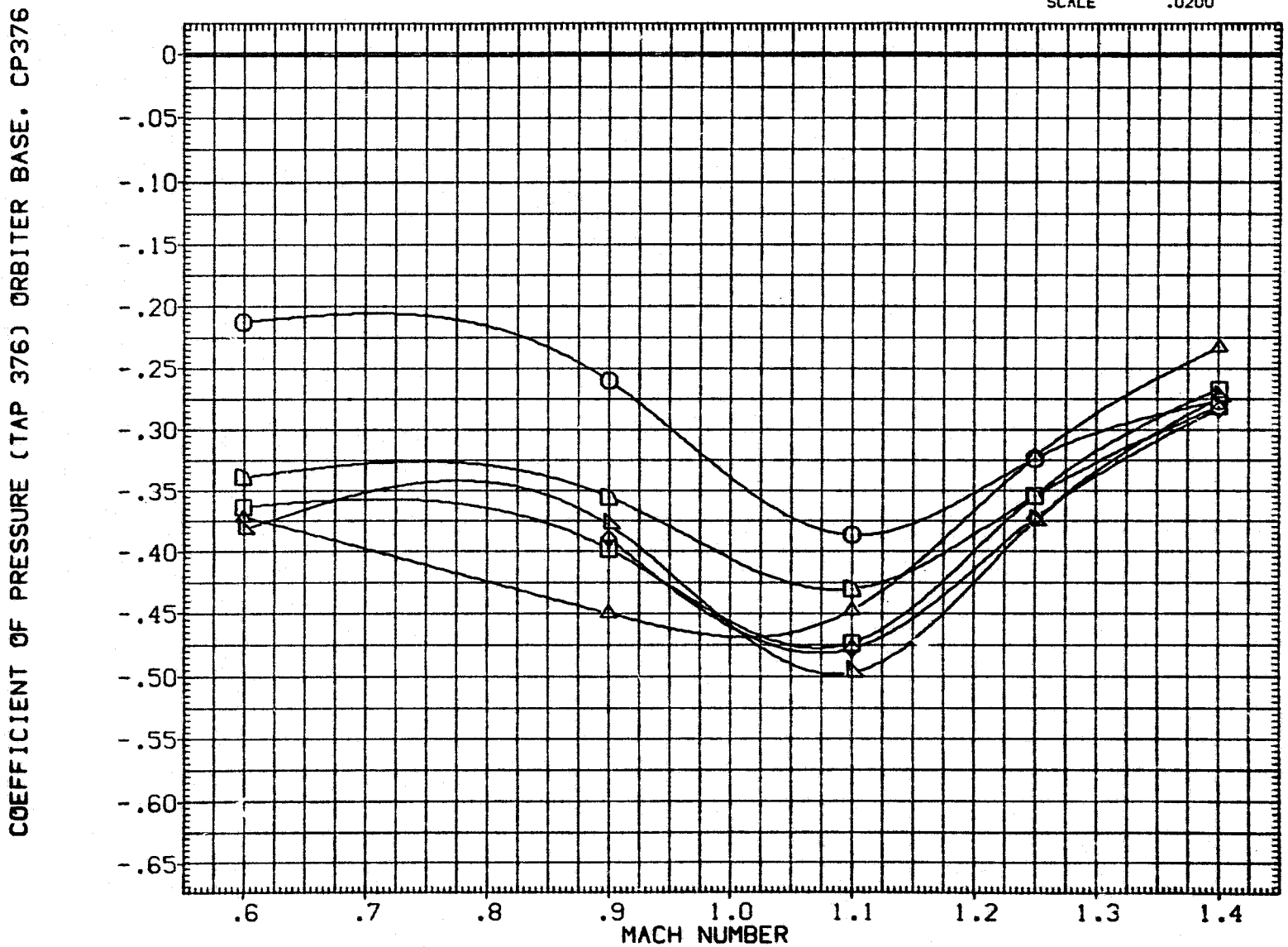



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE40B0) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE40B5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

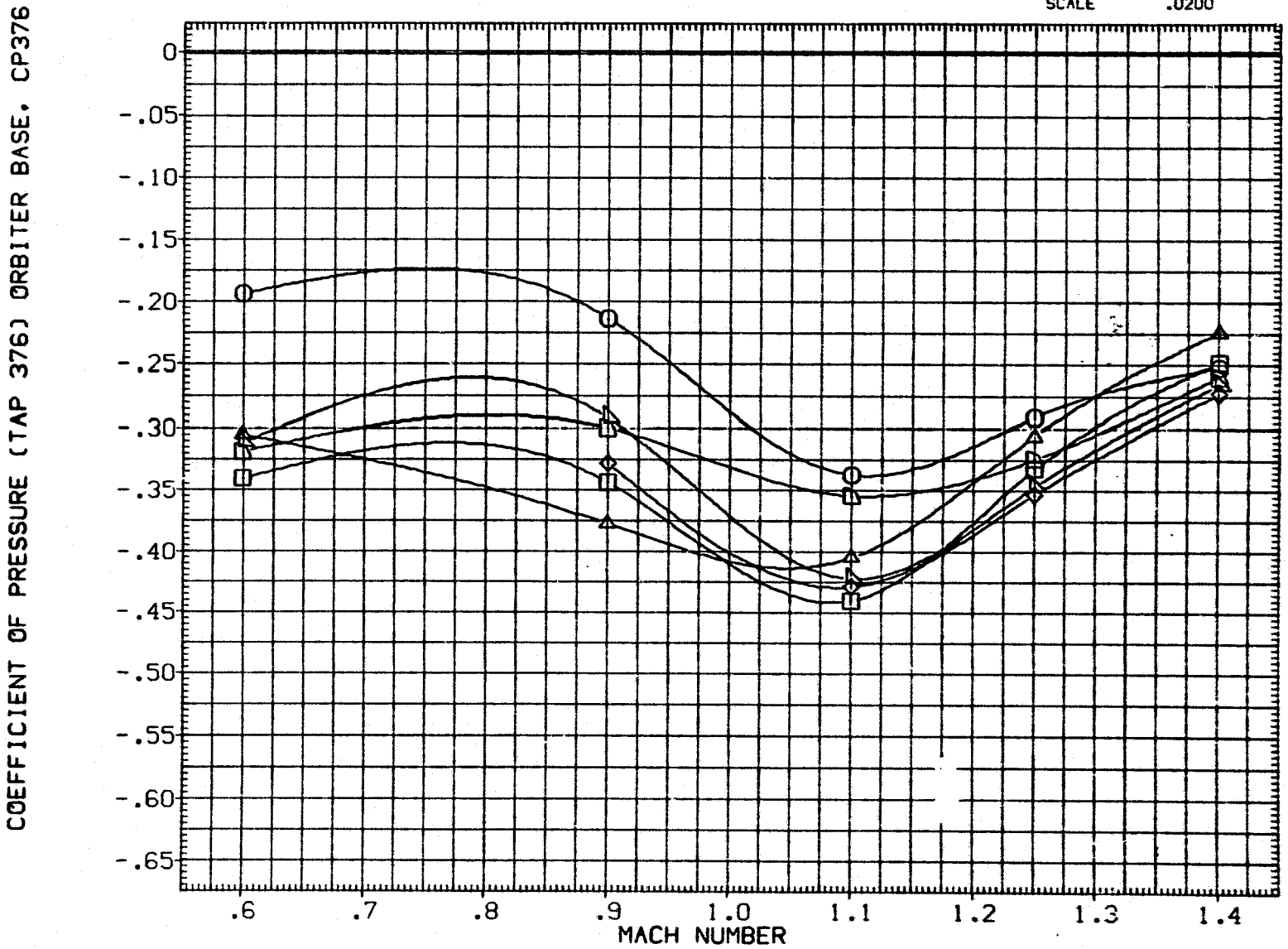



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4028) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (AE4020) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (AE4016) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (AE4011) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (AE4080) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (AE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

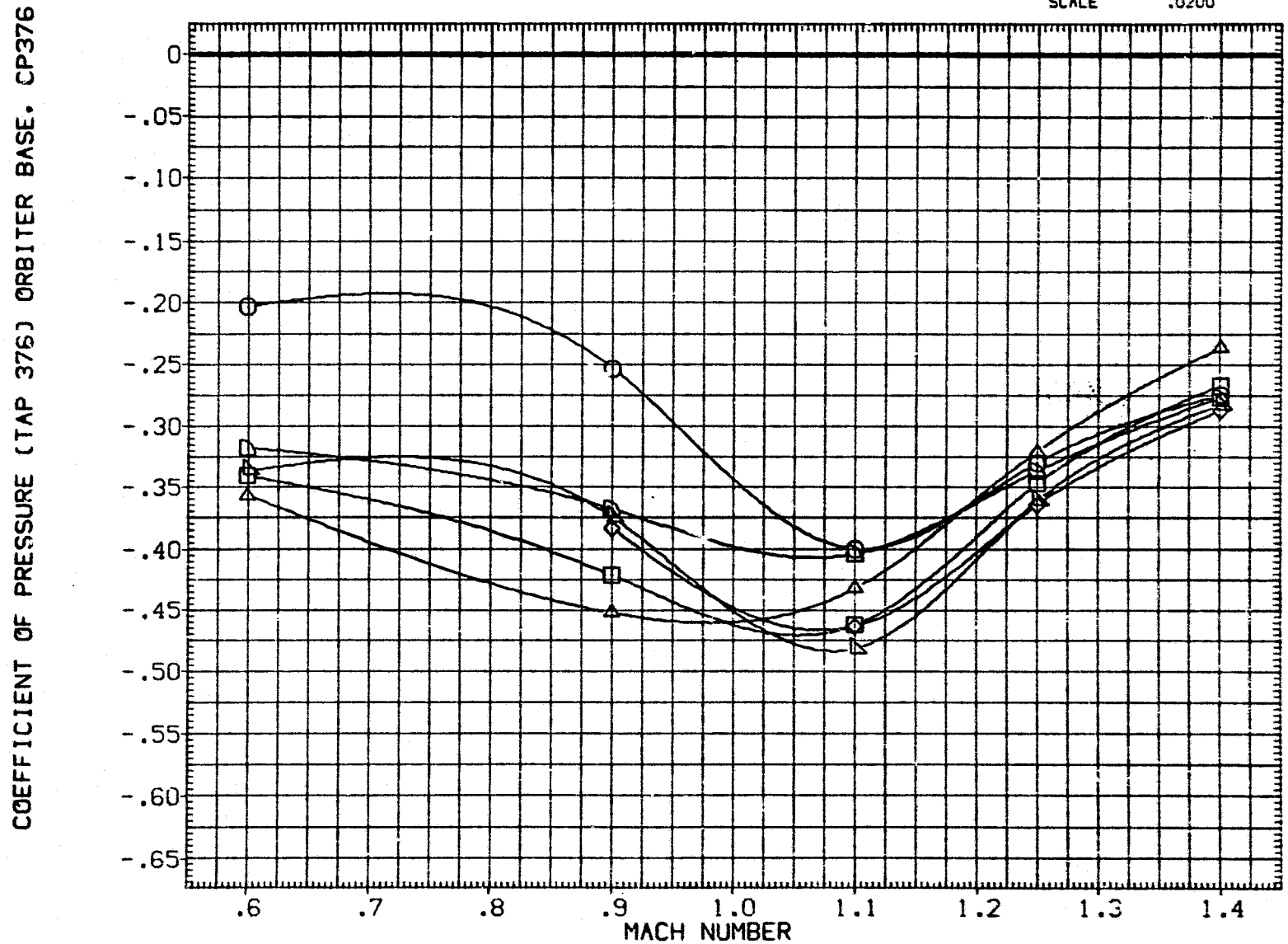



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4028) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE40B0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE40B5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

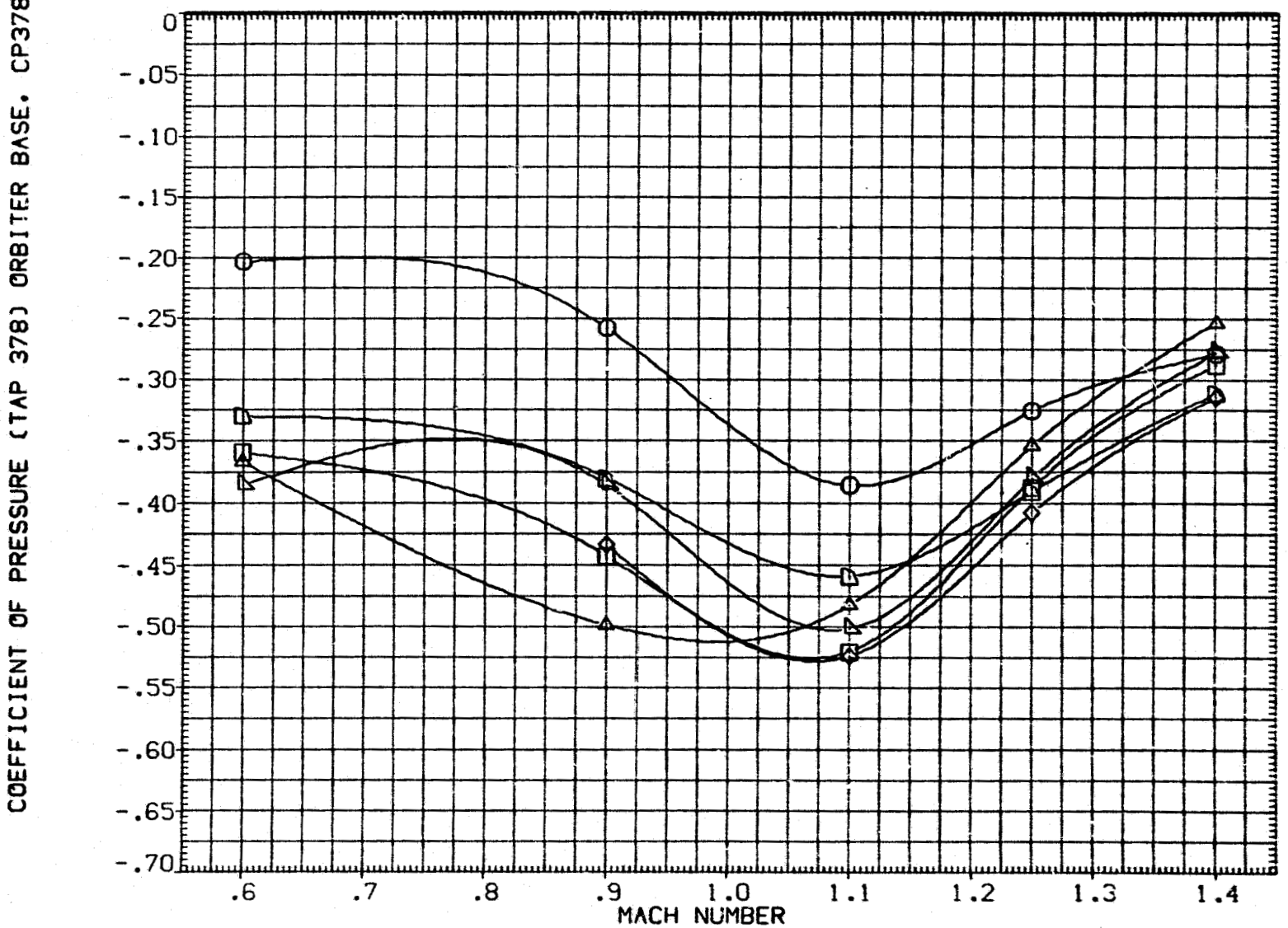



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

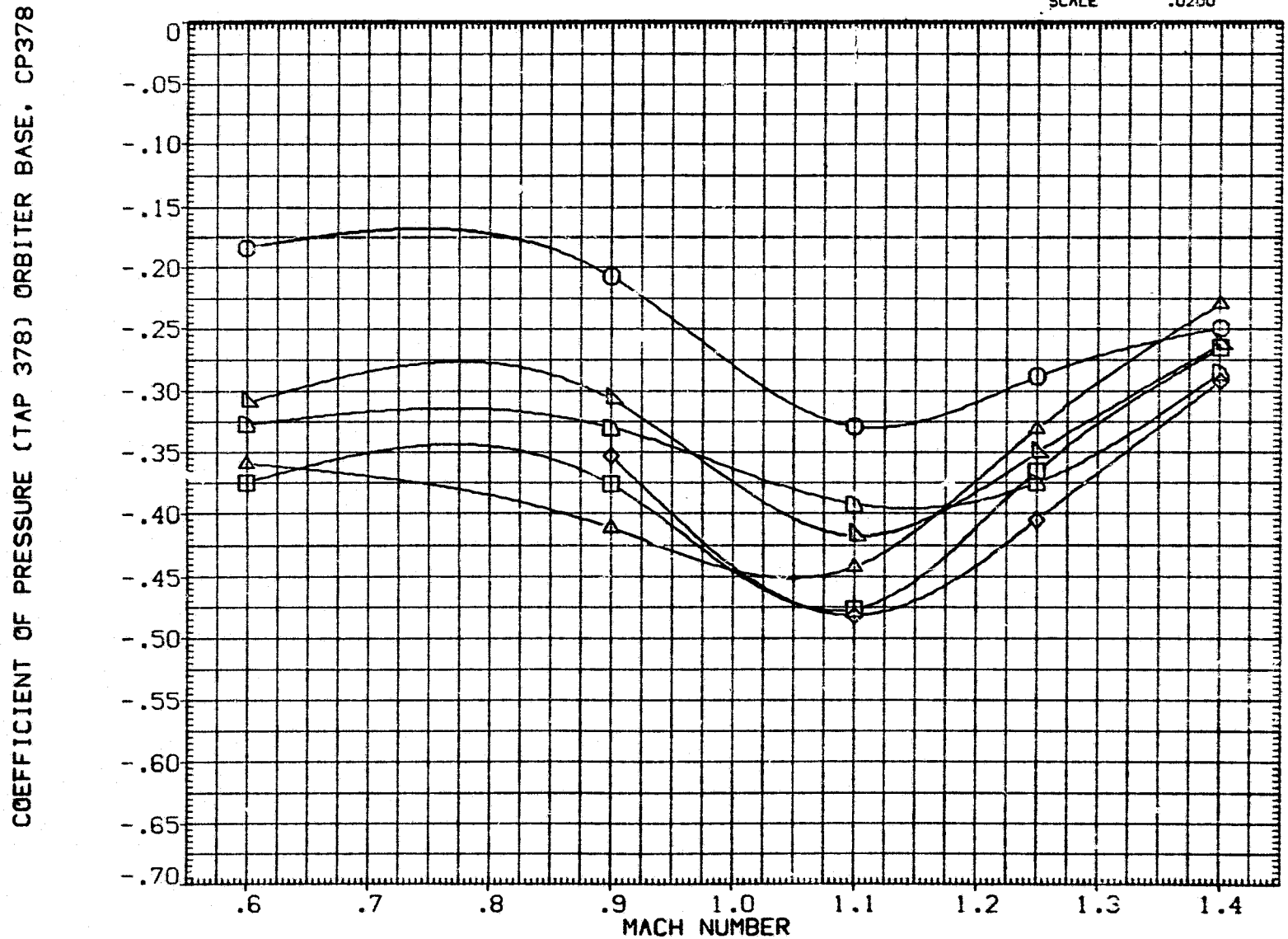



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE40B0) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE40B5) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

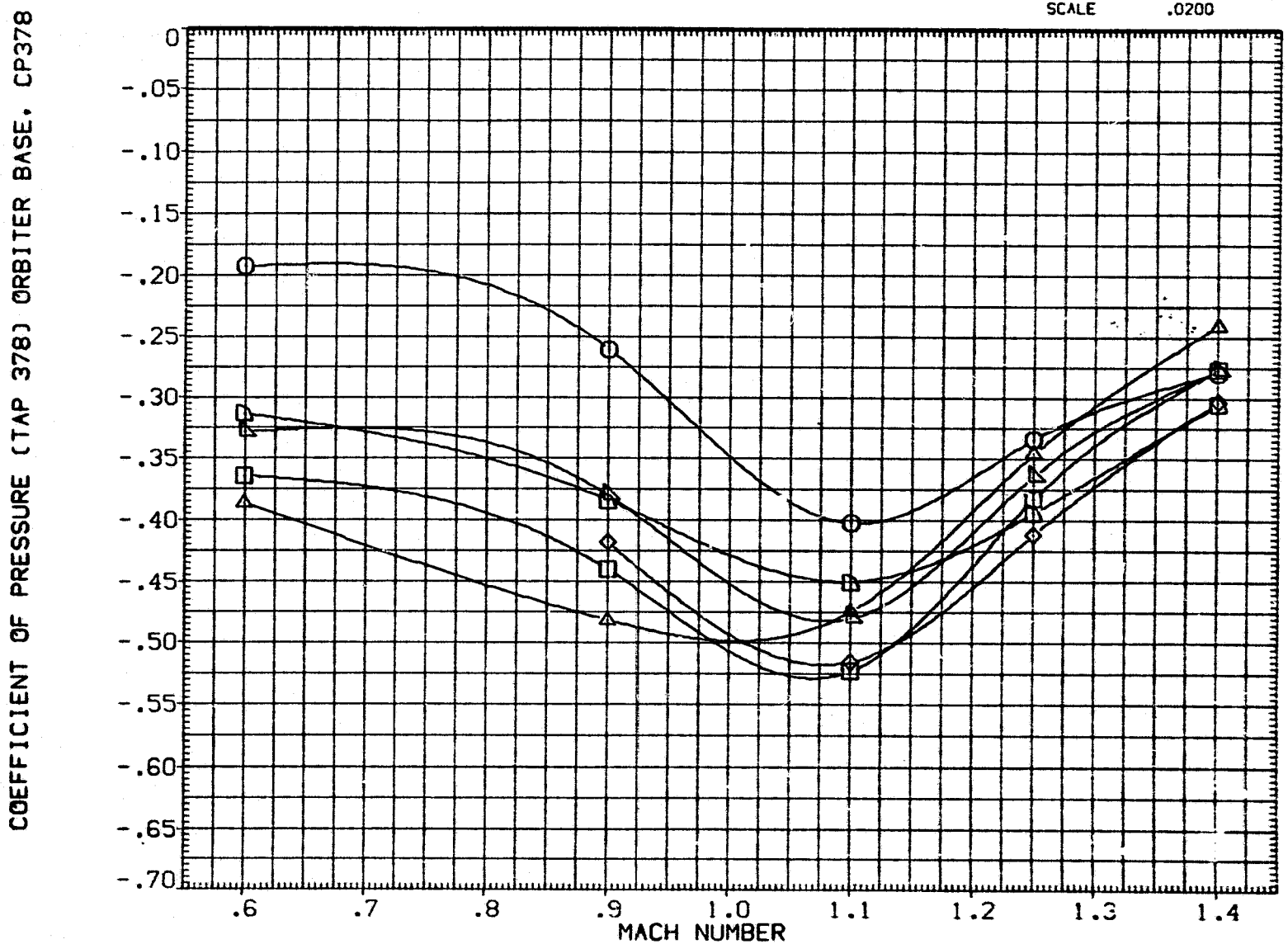



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

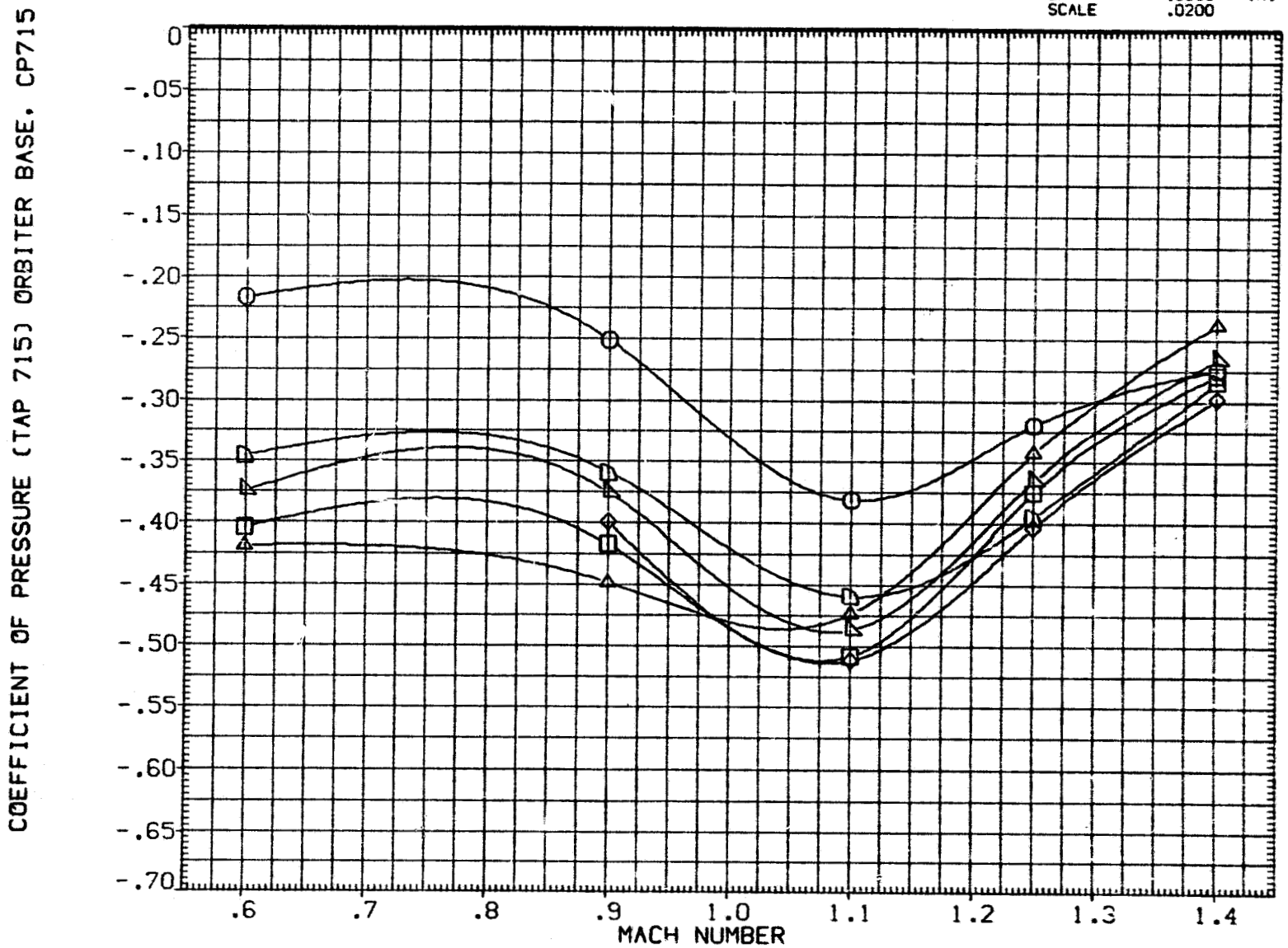



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE40B0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE40B5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

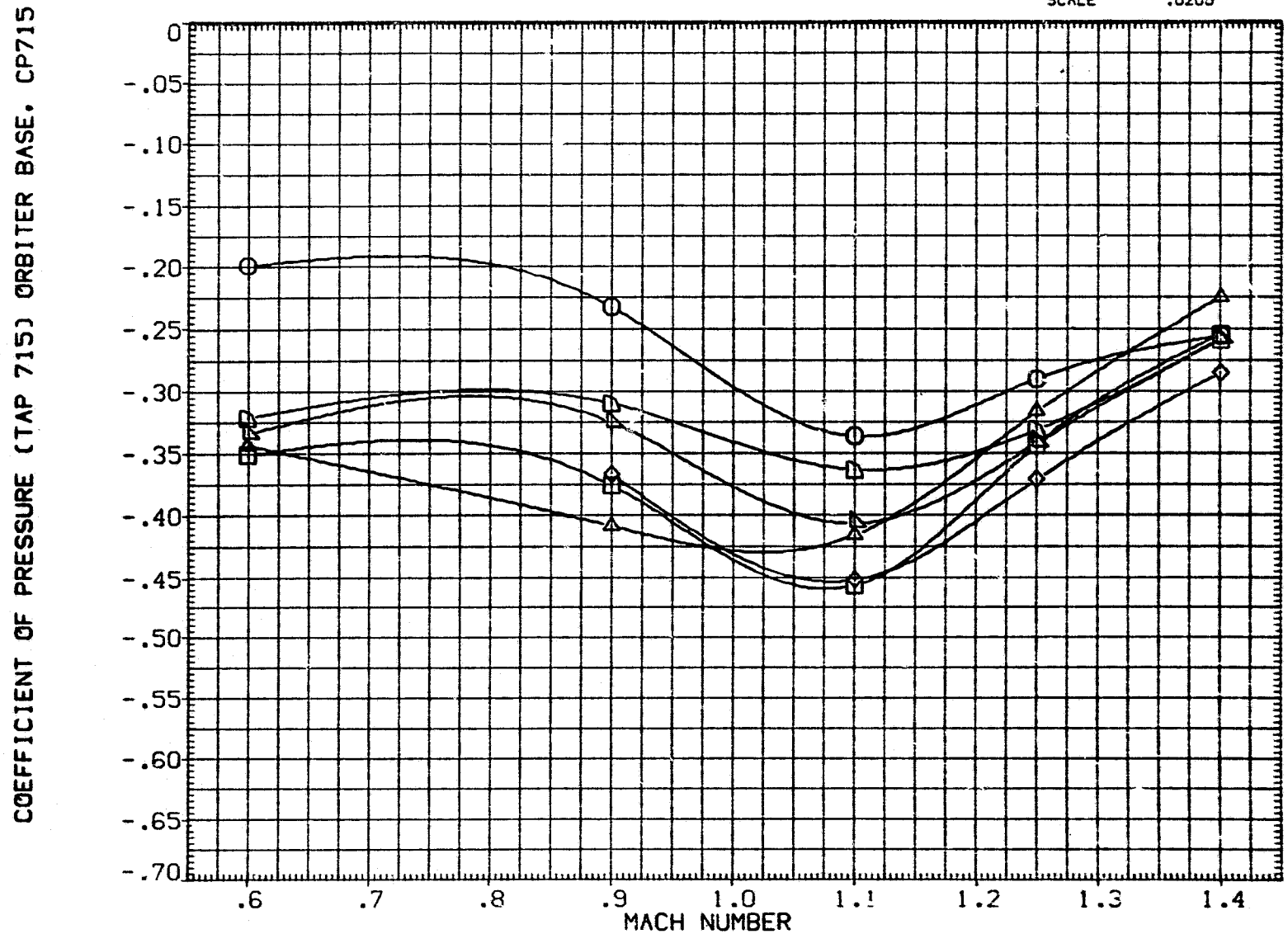



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

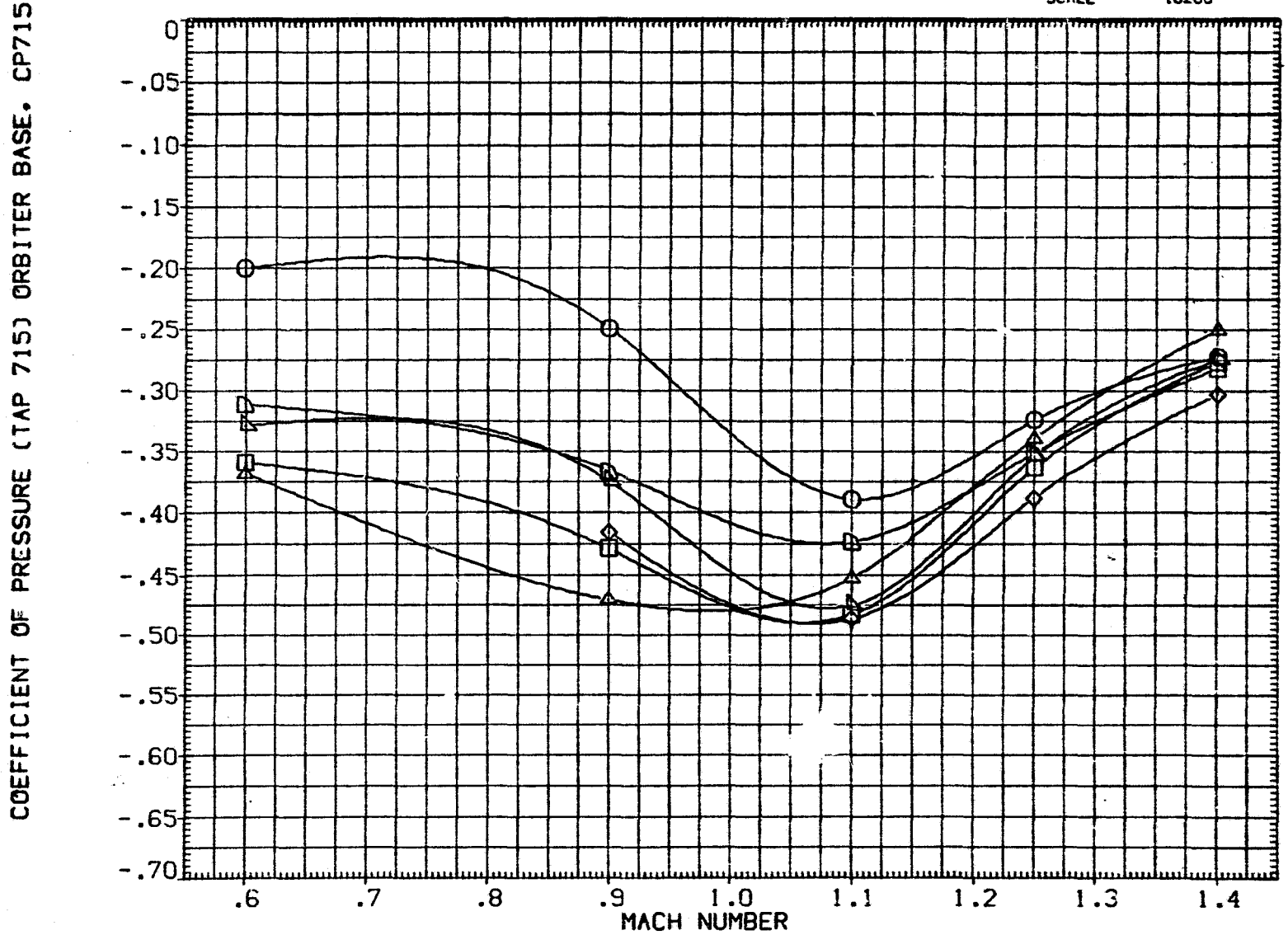



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

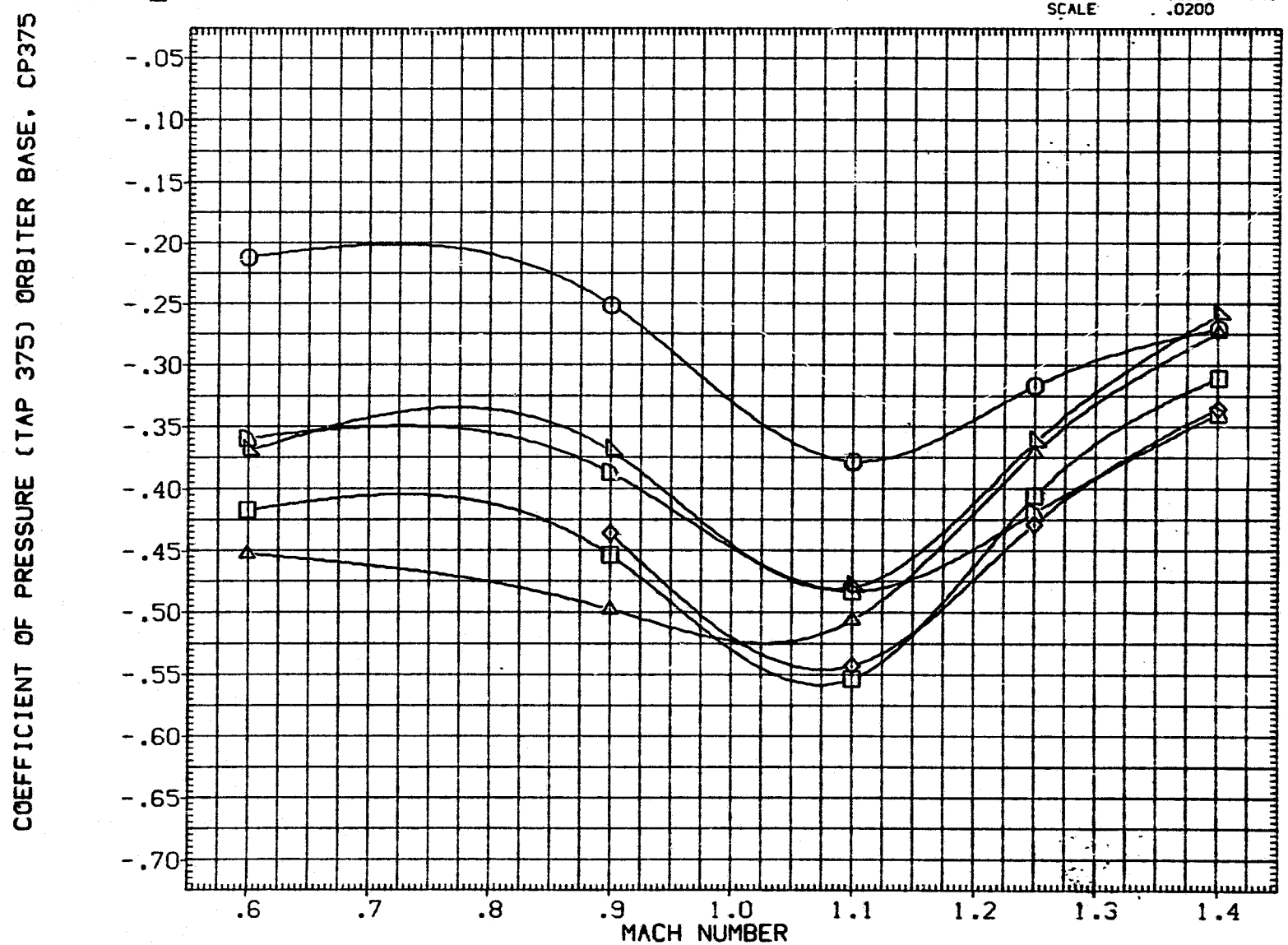



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

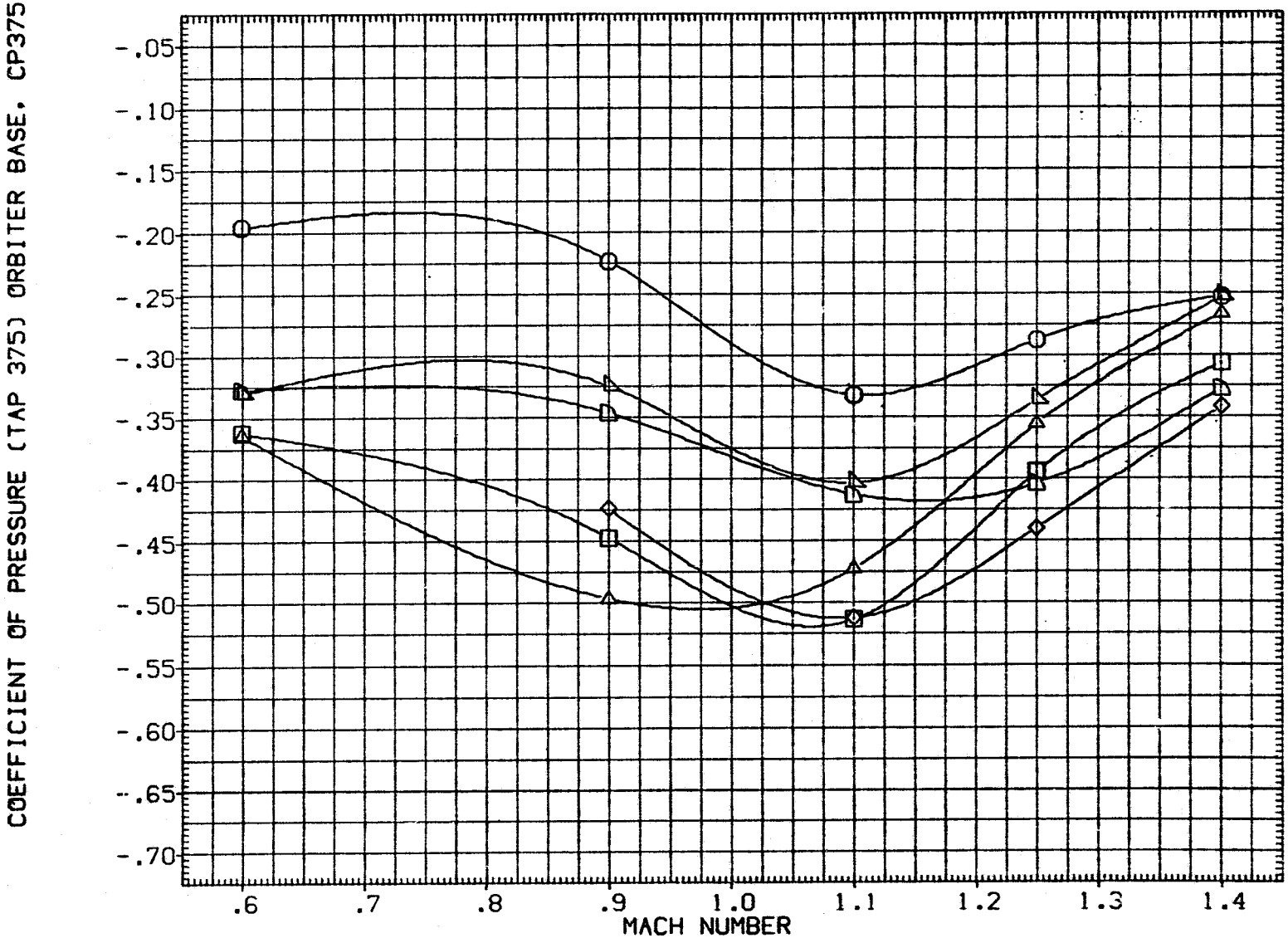



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4028) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

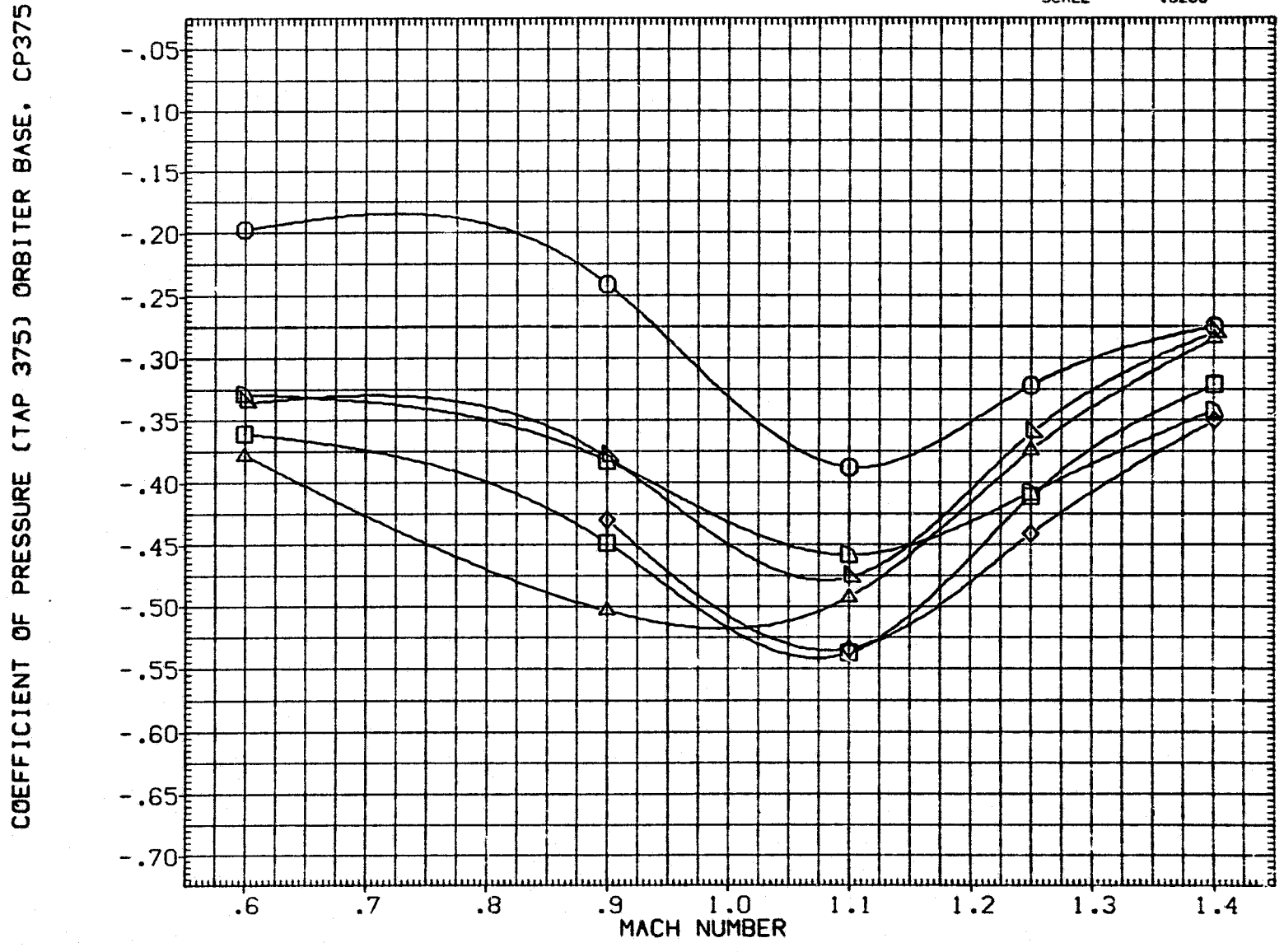



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE40B0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE40B5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

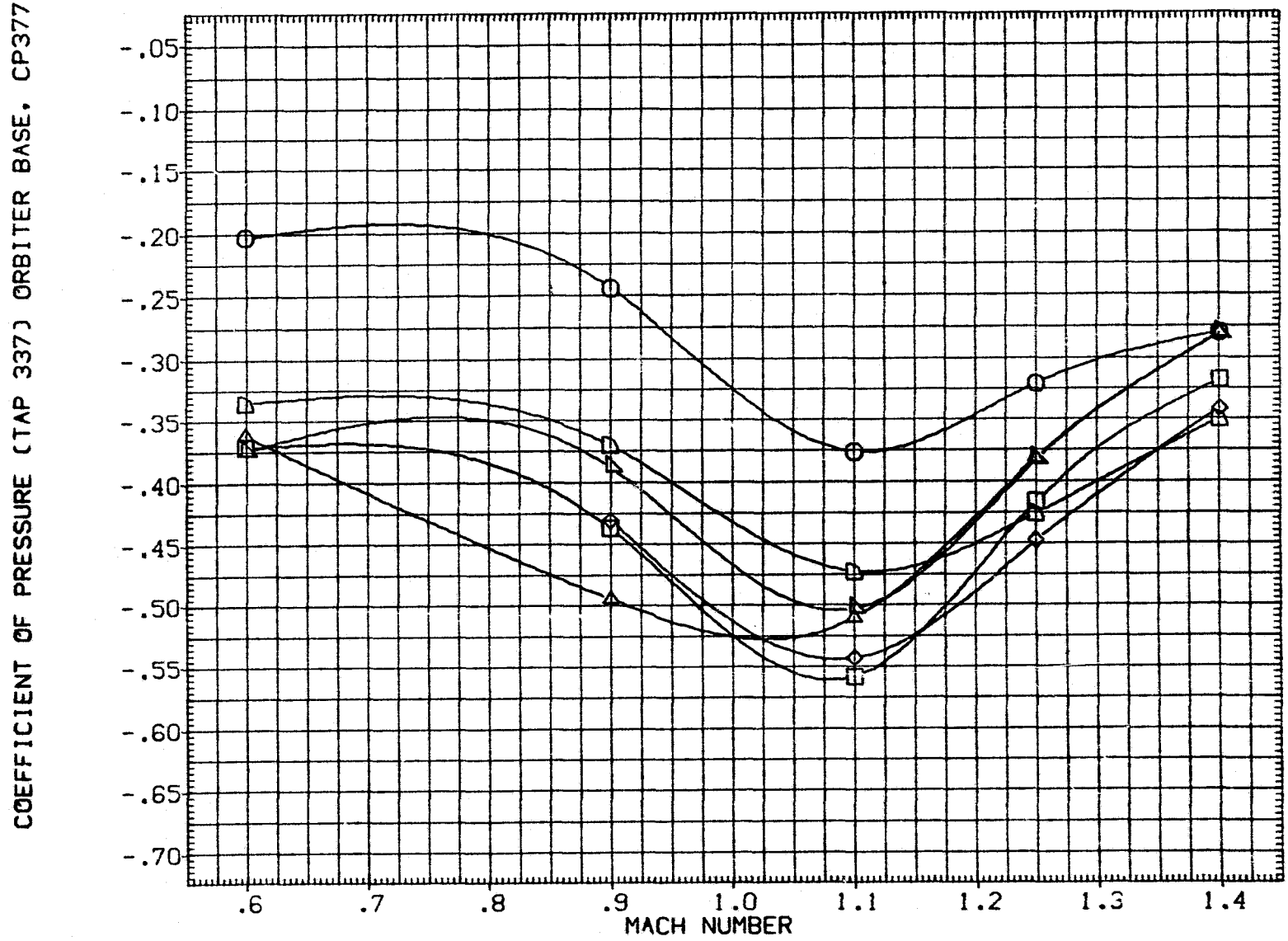



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE40B0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE40B5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

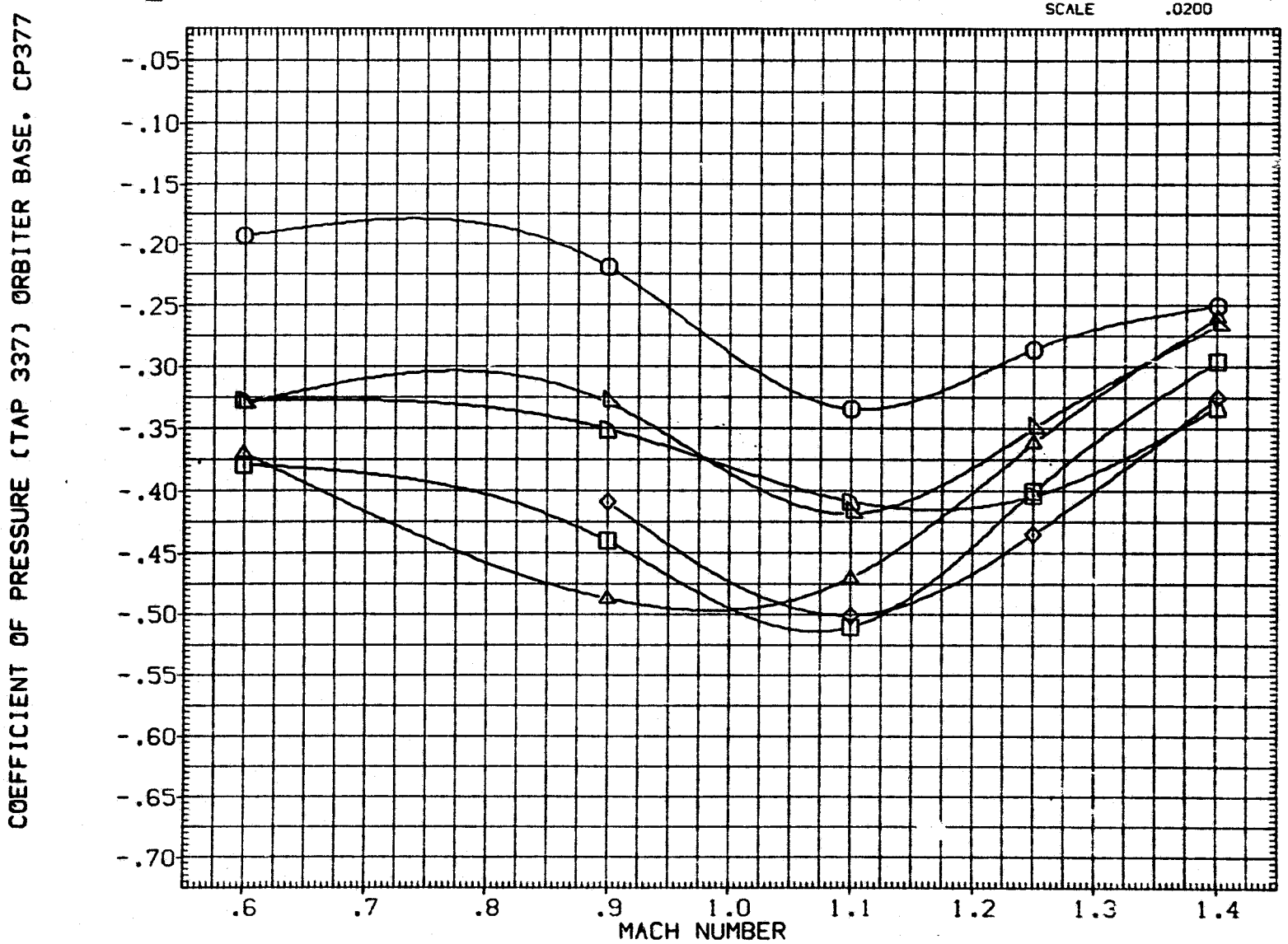



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

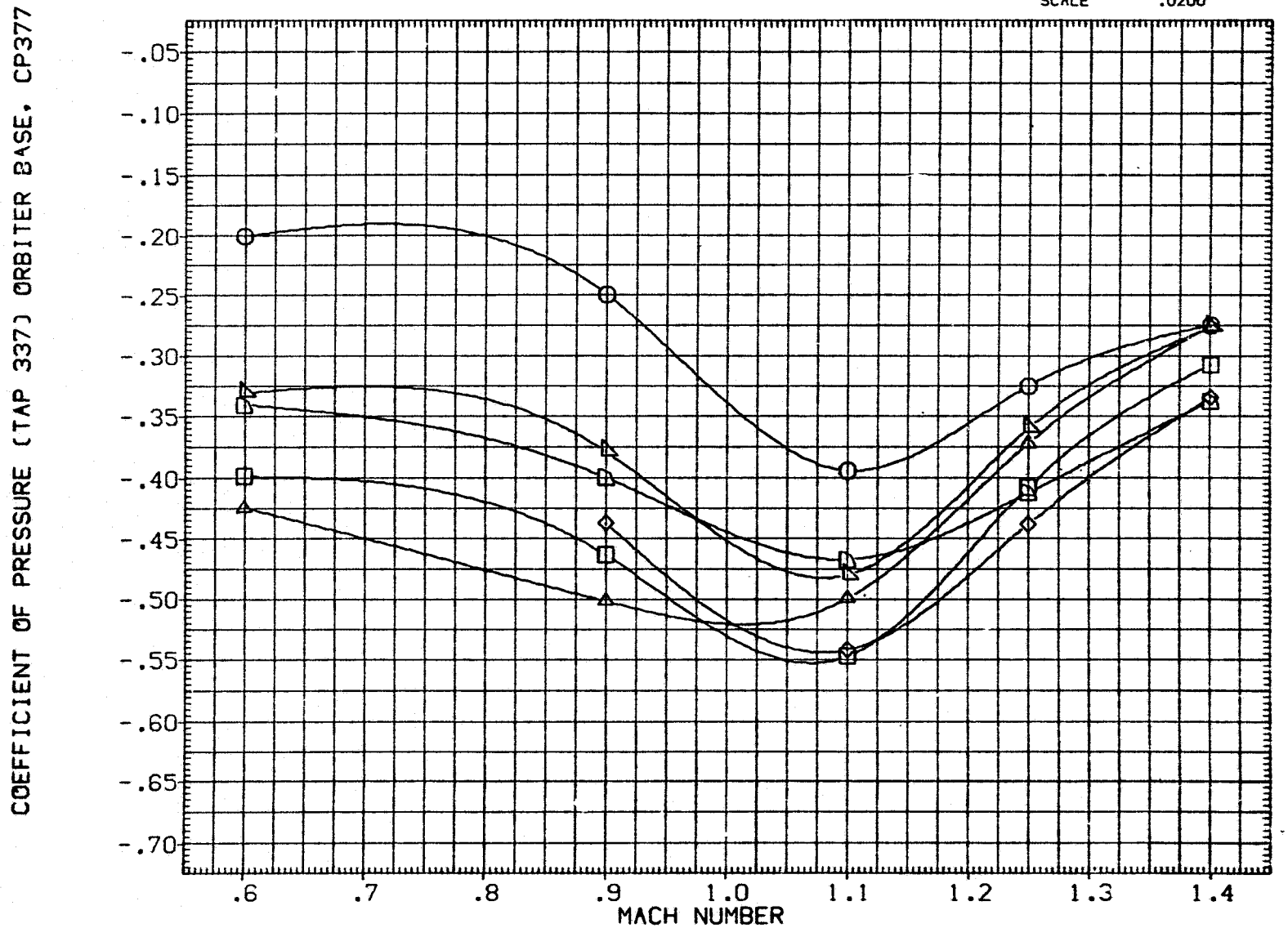



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE40B0) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE40B5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

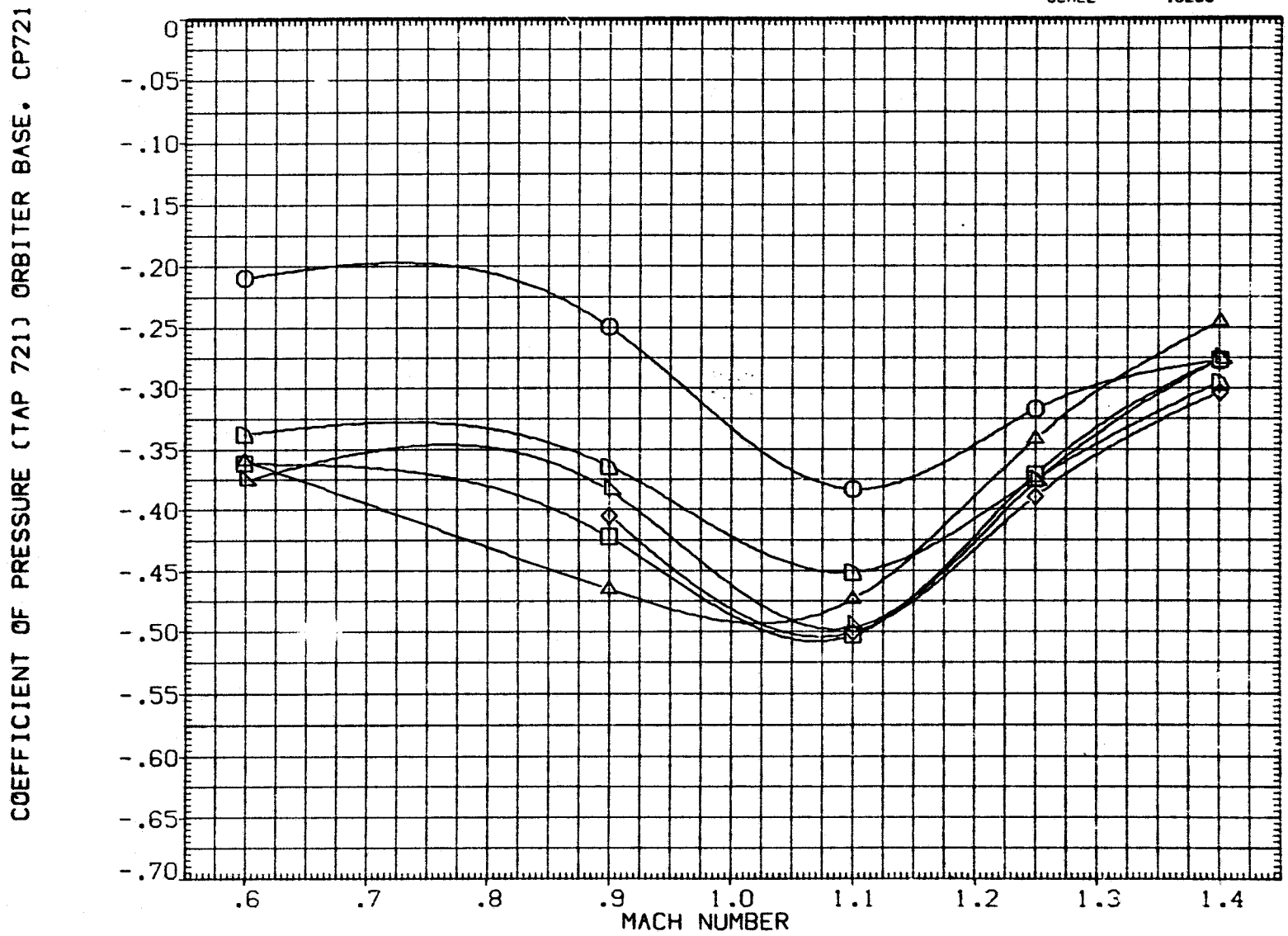



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4028) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

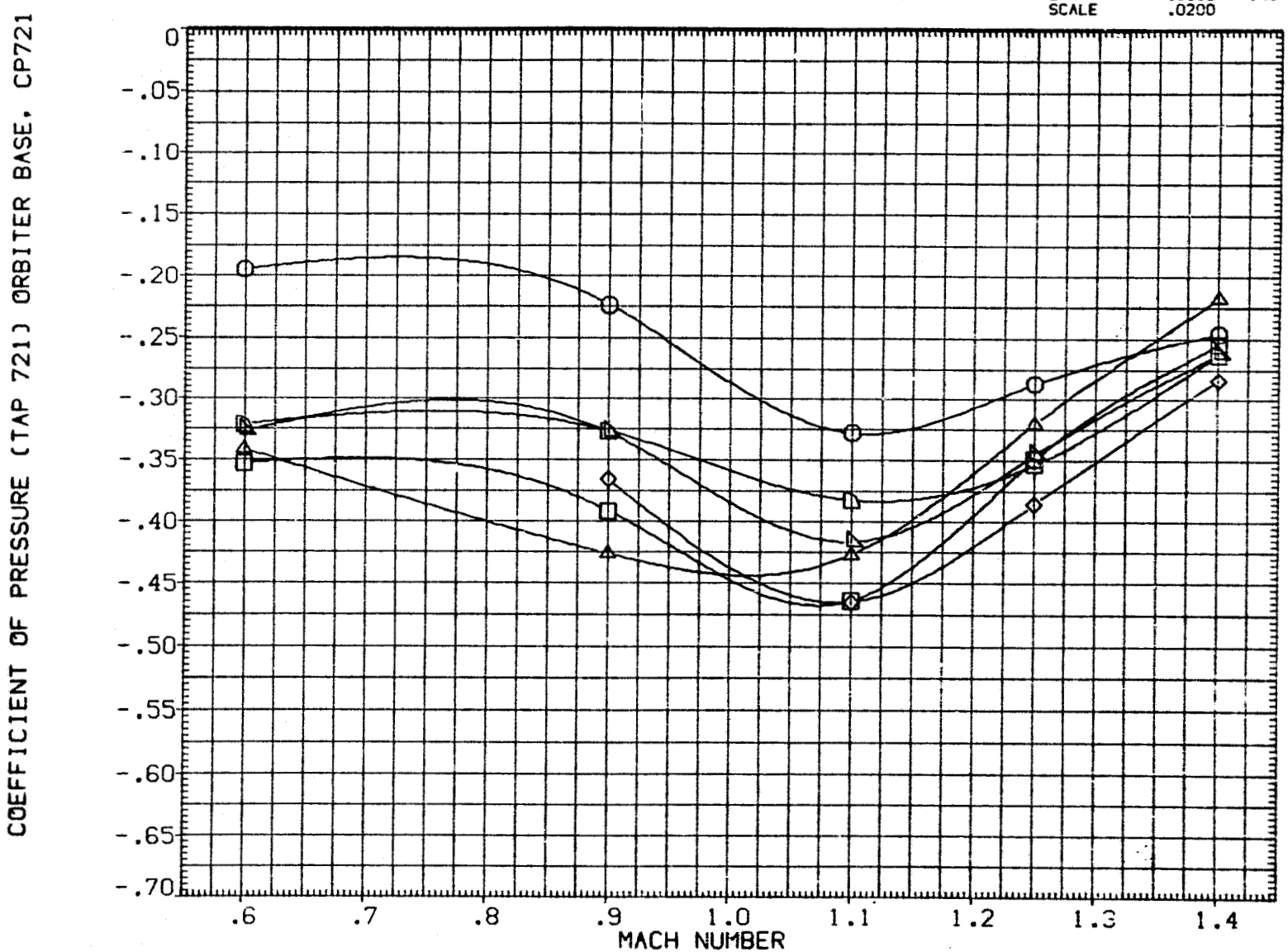



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE40B0) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE40B5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

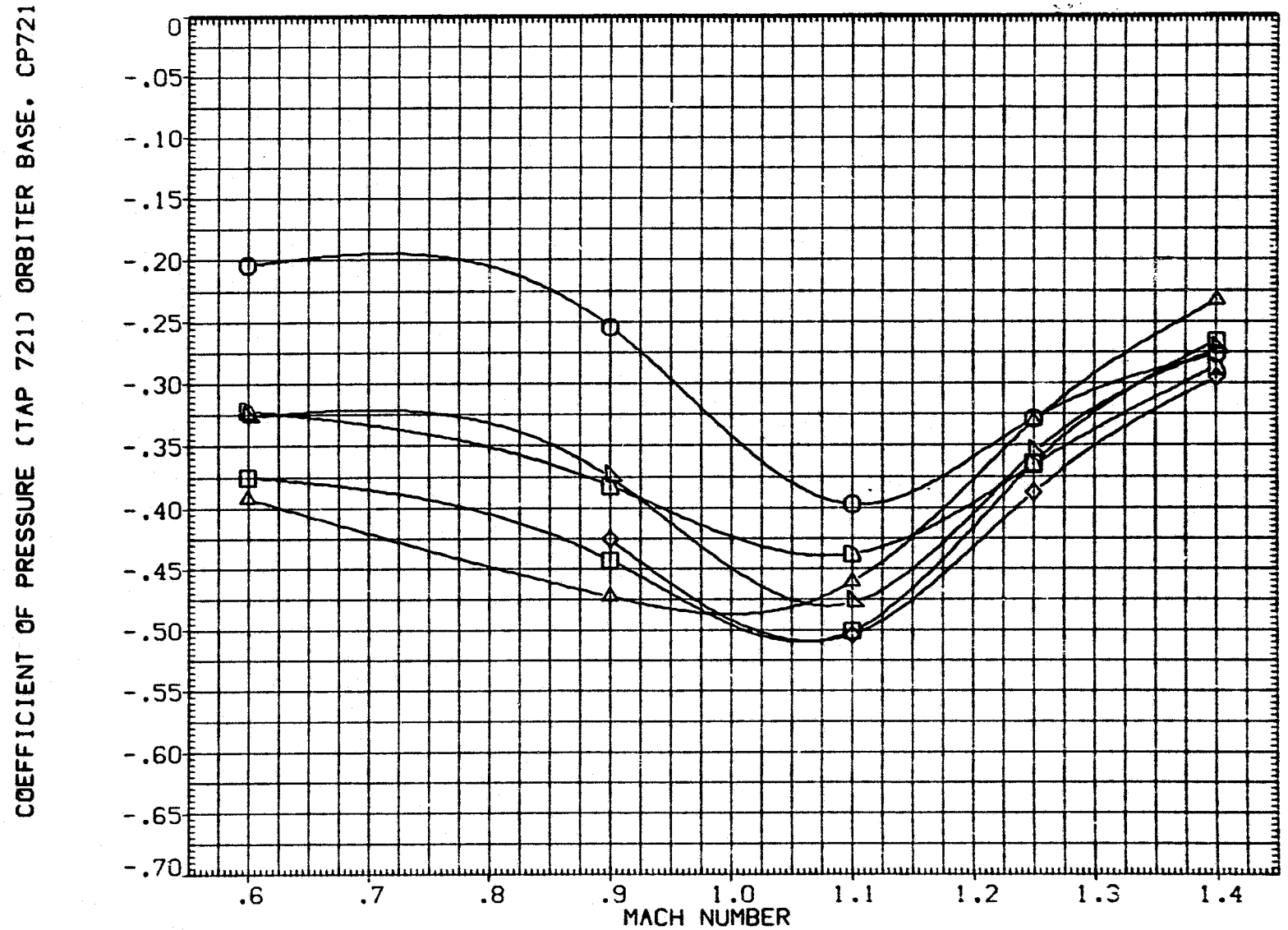



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

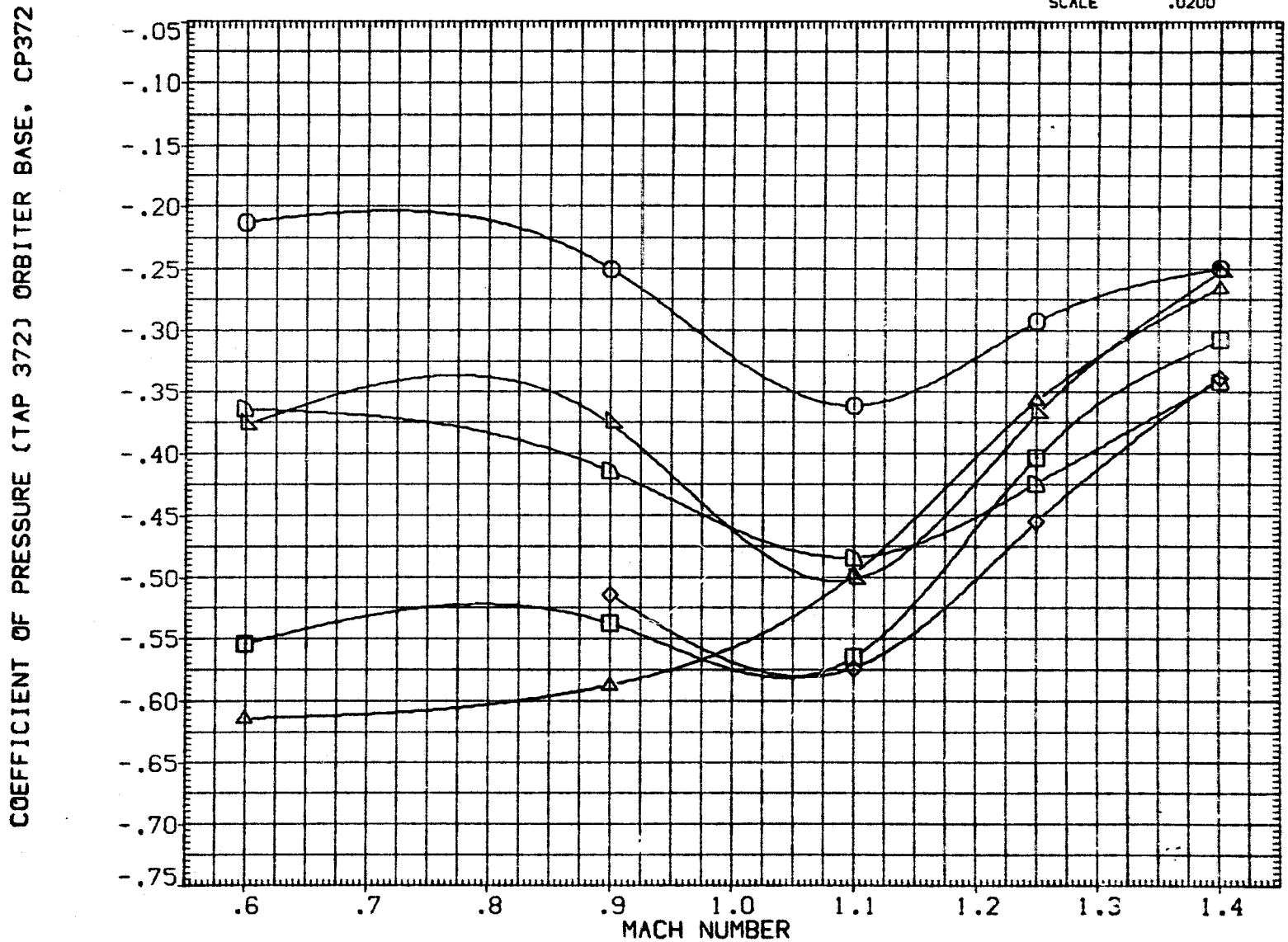



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ⬠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

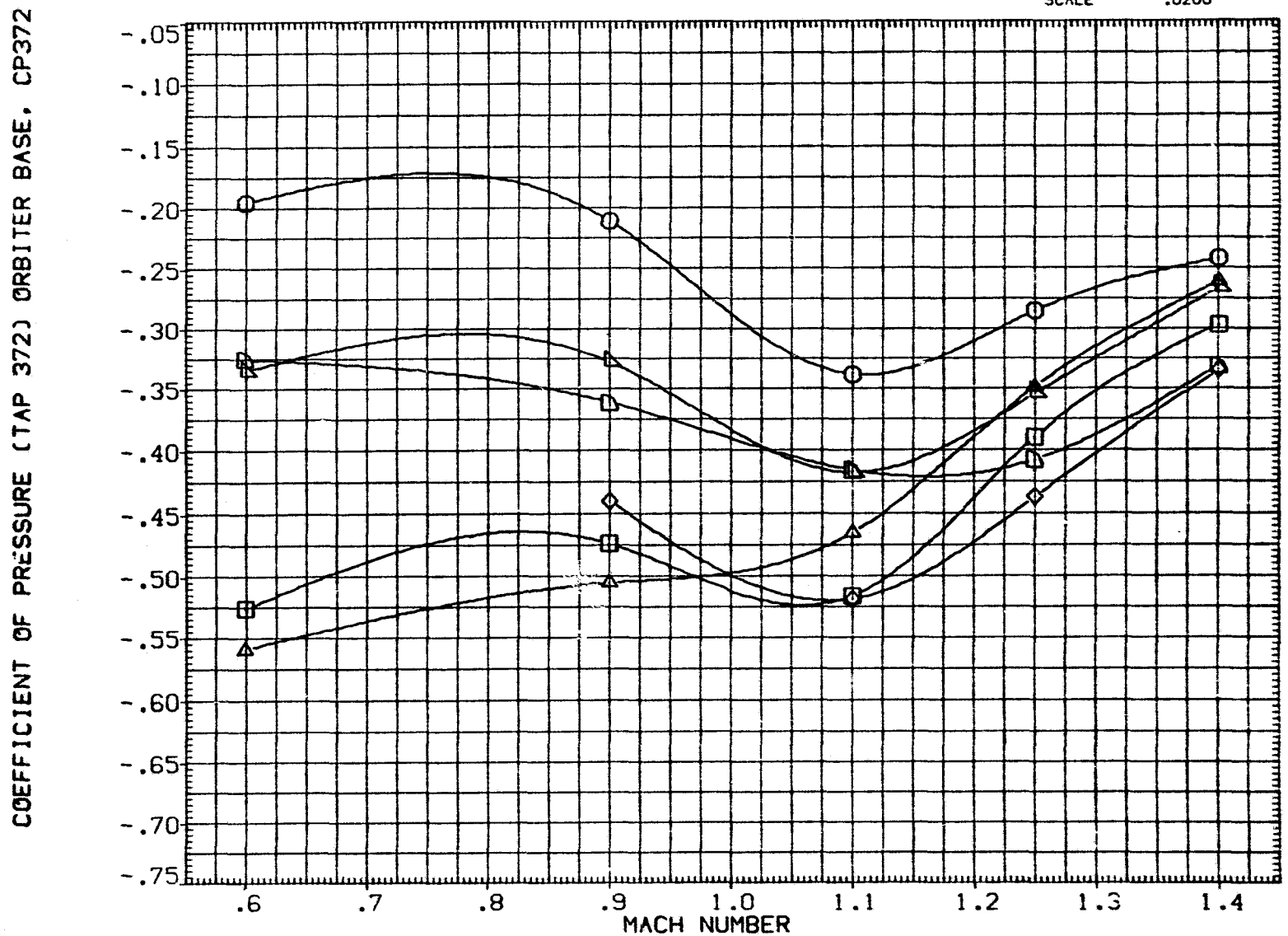



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE40B0) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE40B5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

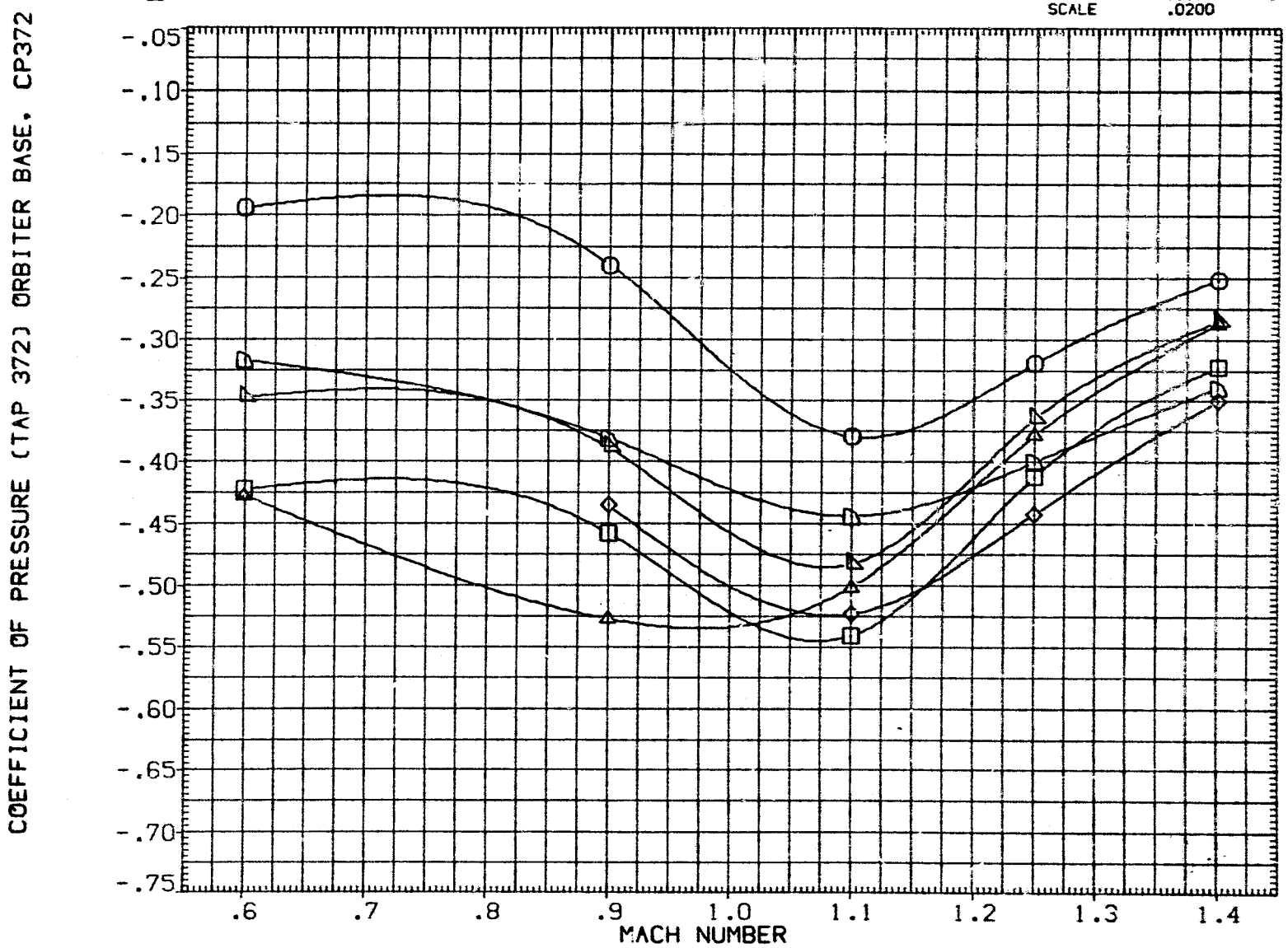



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

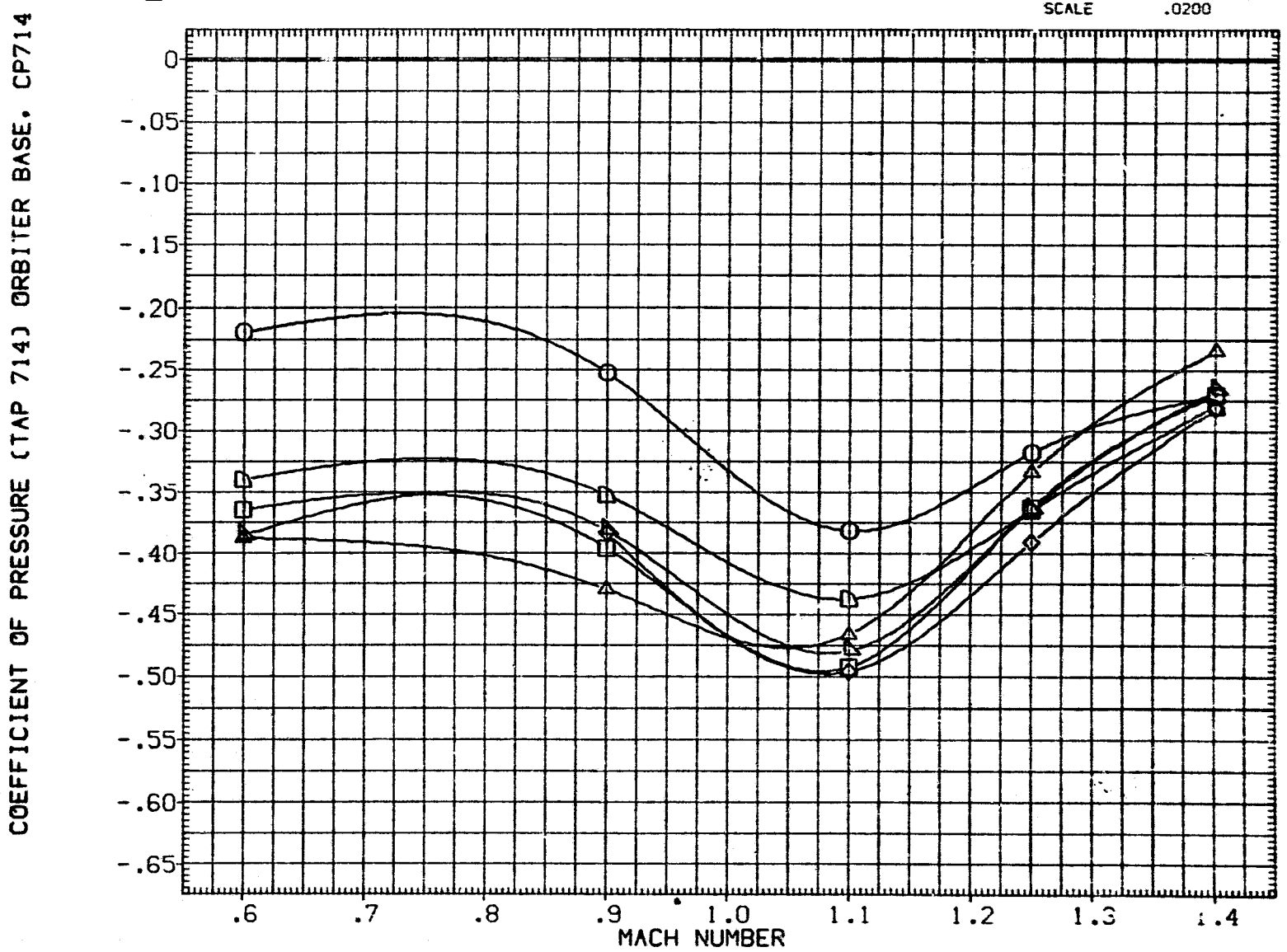



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4018) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE40B0) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE40B5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

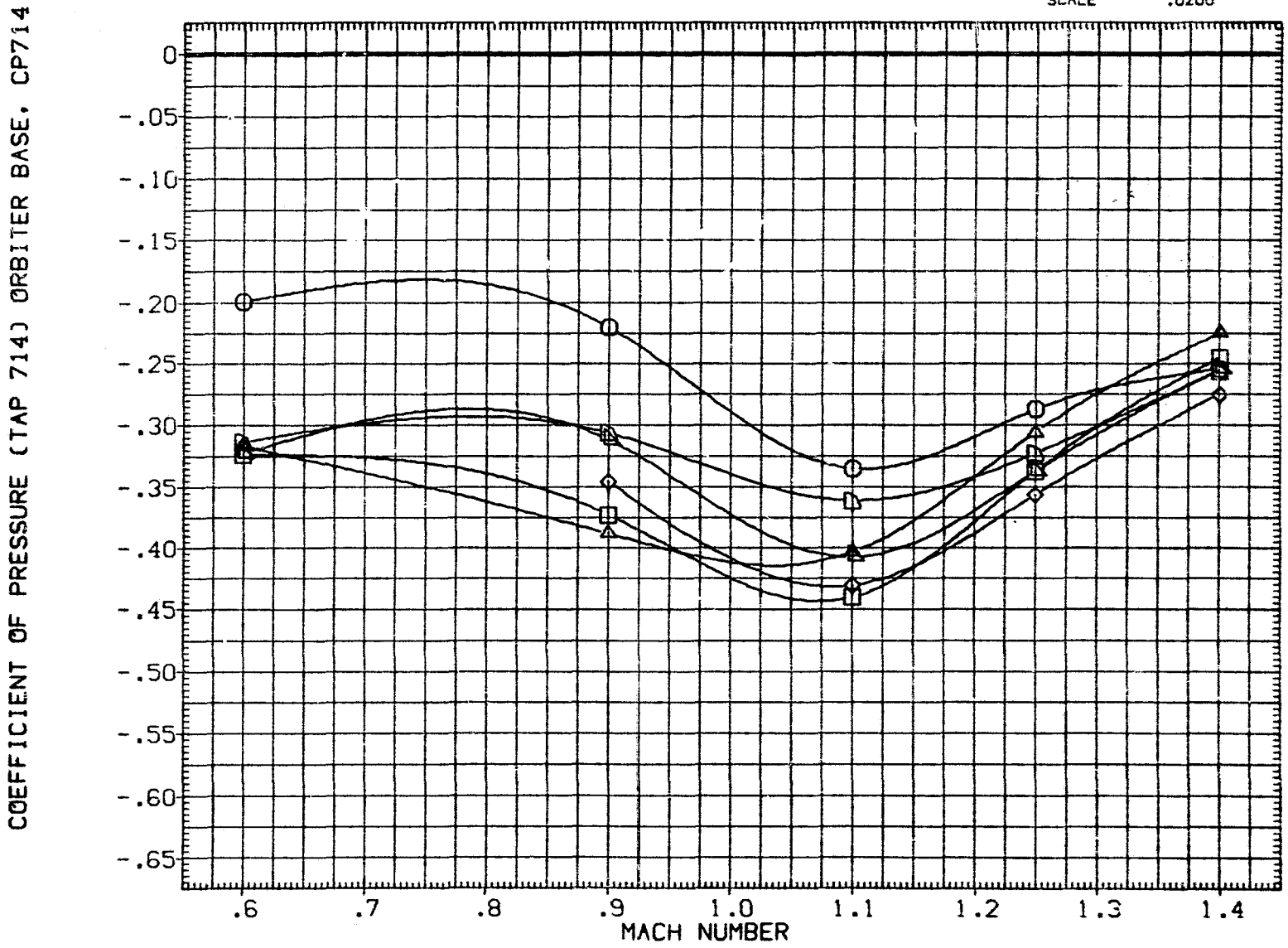



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1280.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

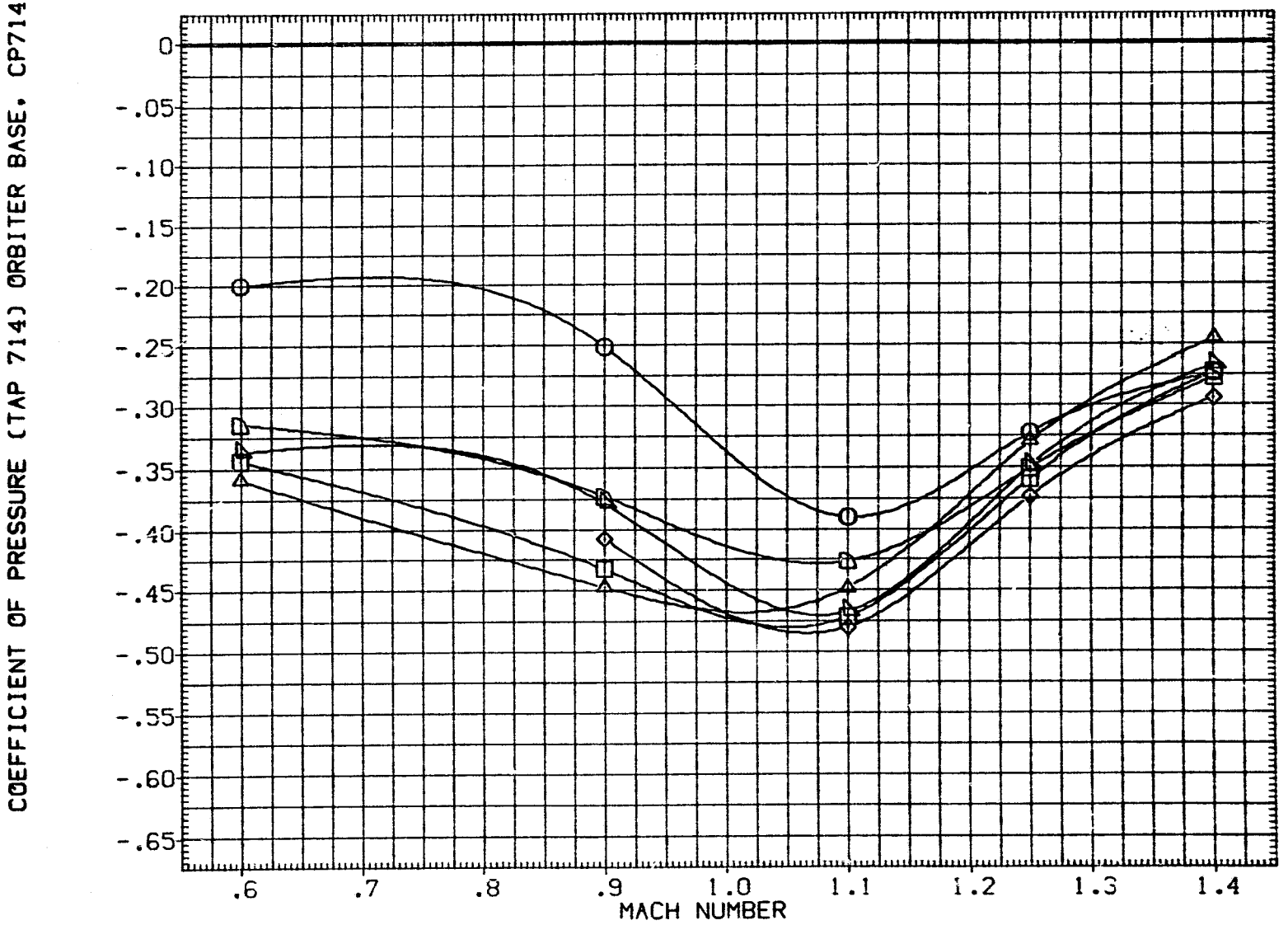



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4028) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | ARC 11 023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

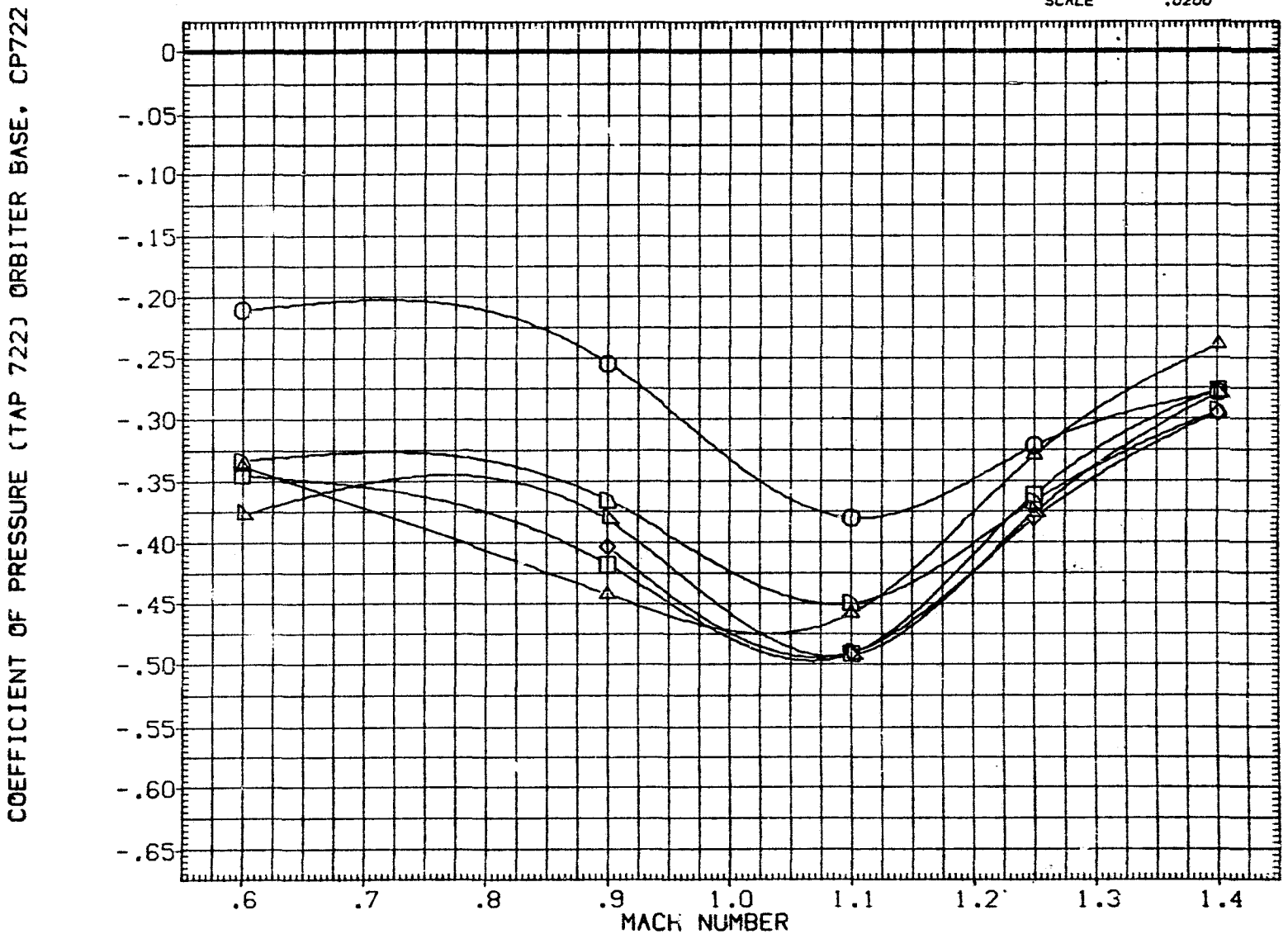



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ⋈ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ▱ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

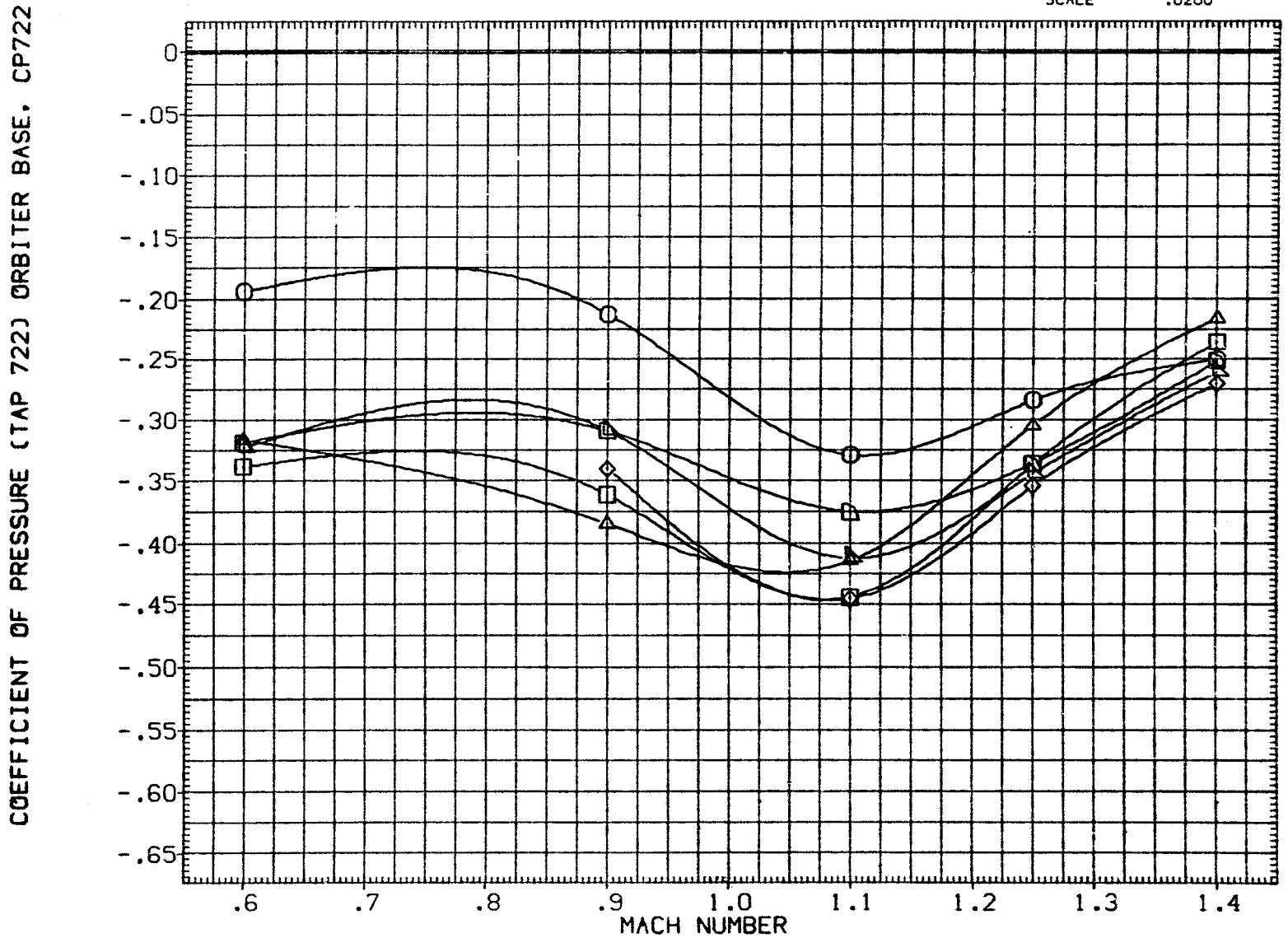



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

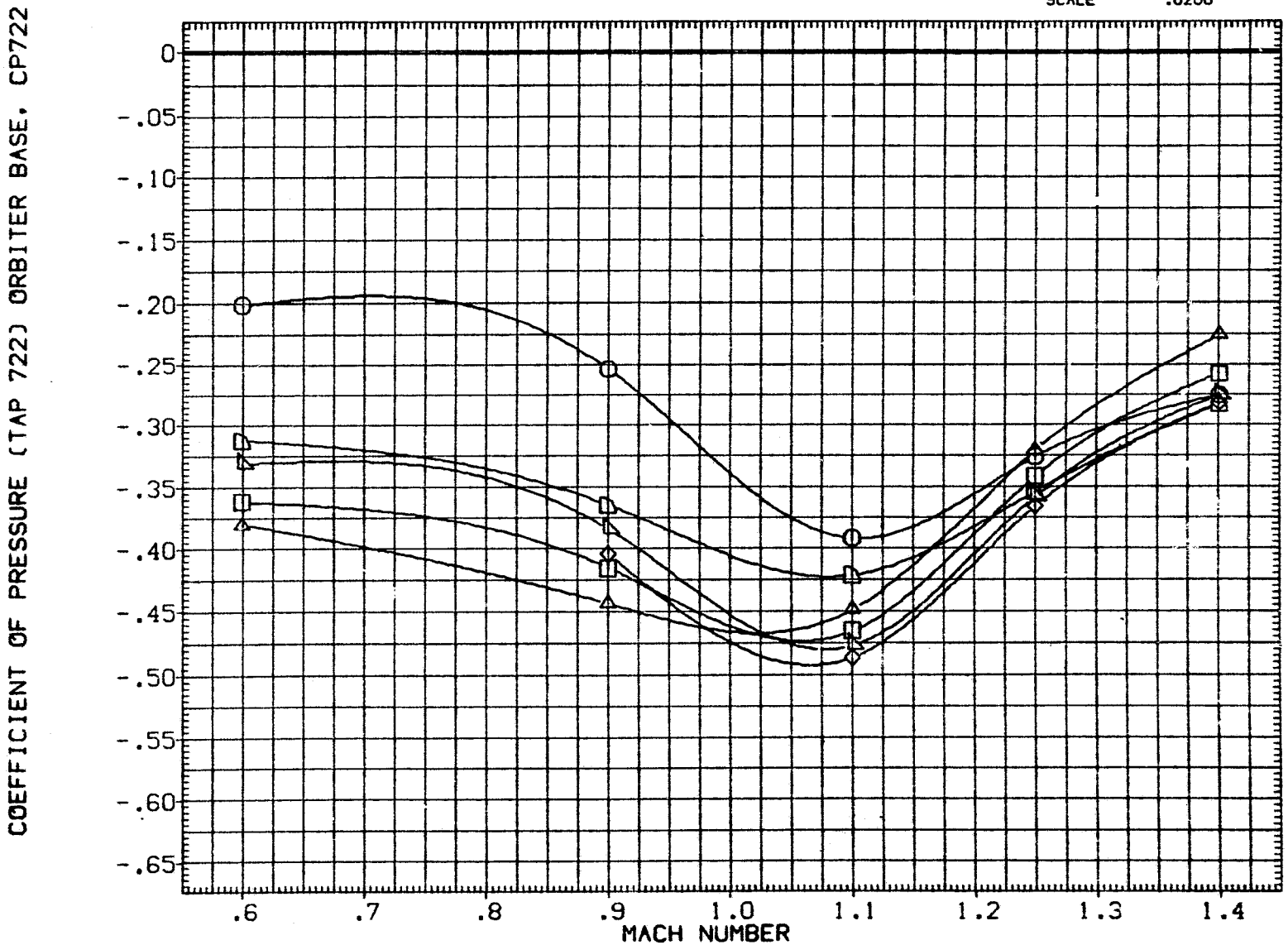



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

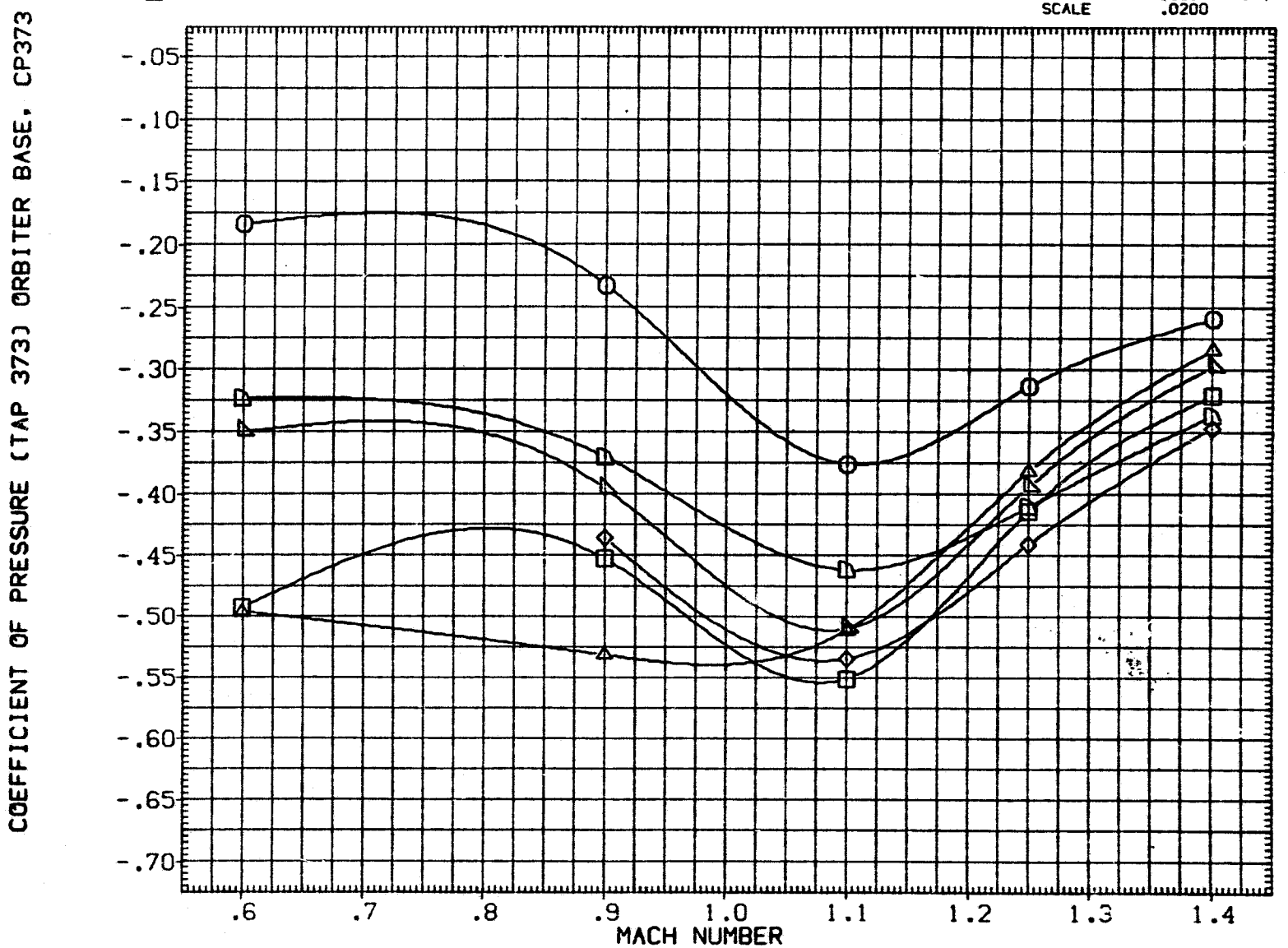



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

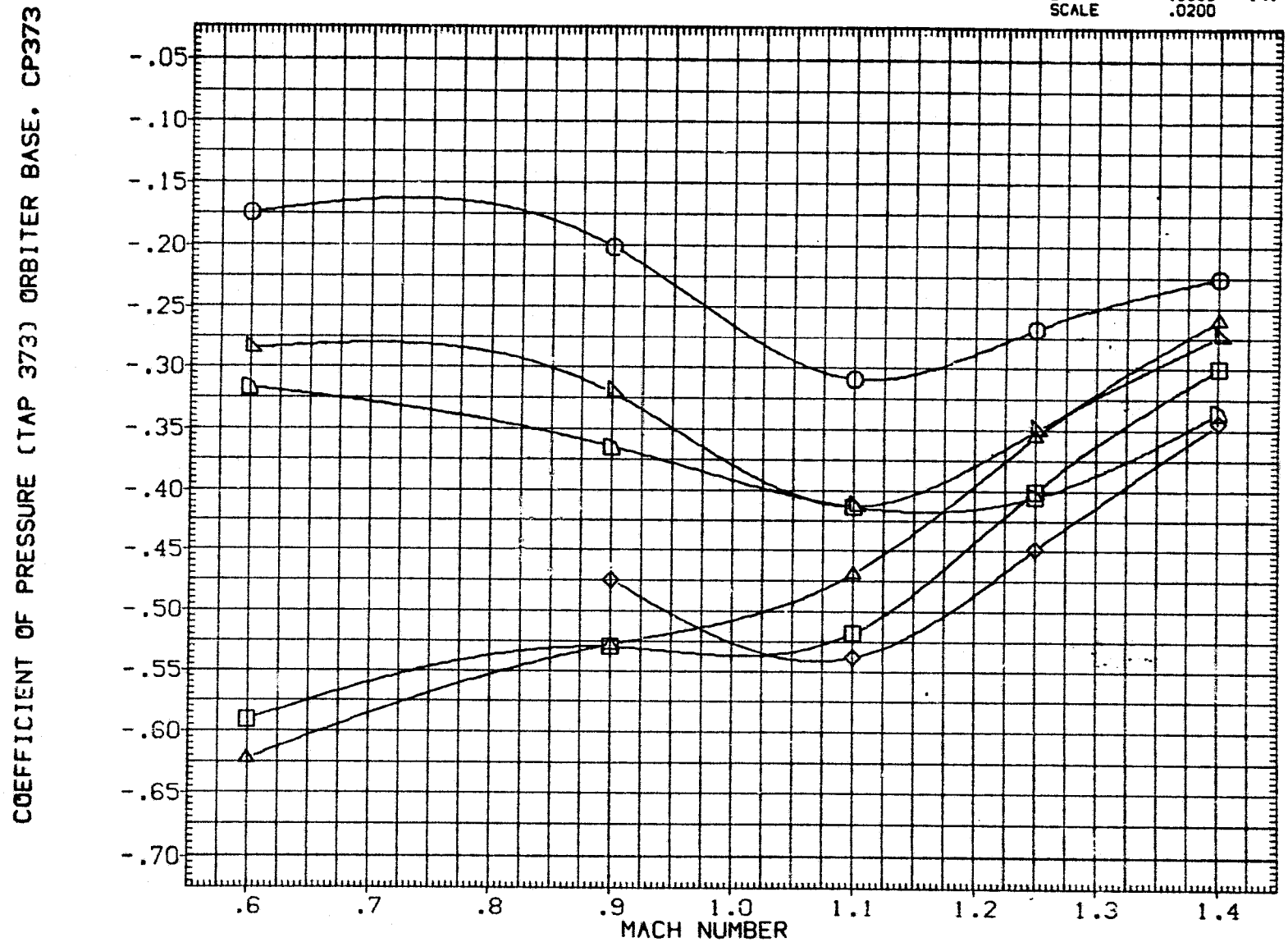



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 CUT) | .000 | .000 | .000 |
| (FE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

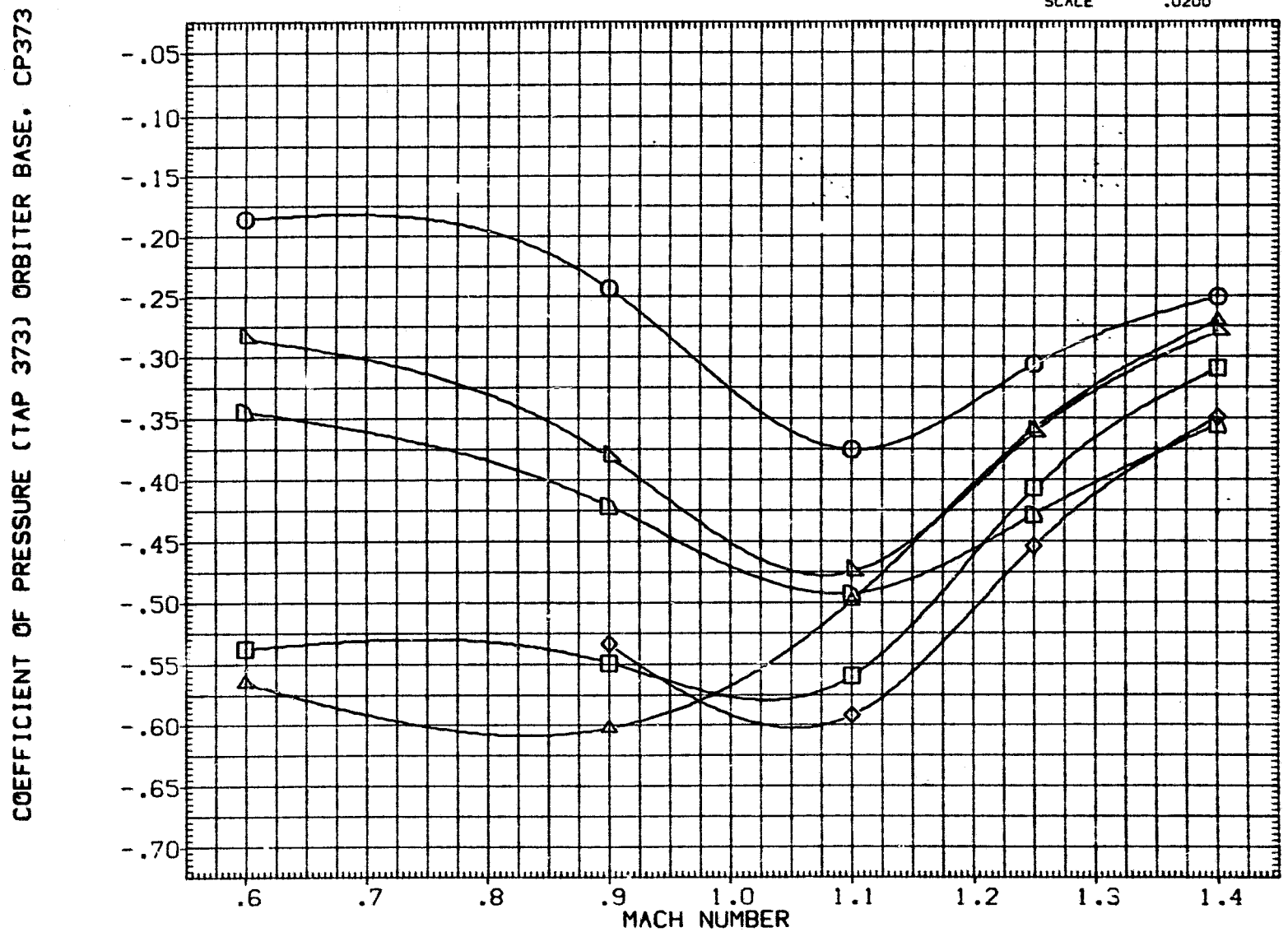



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

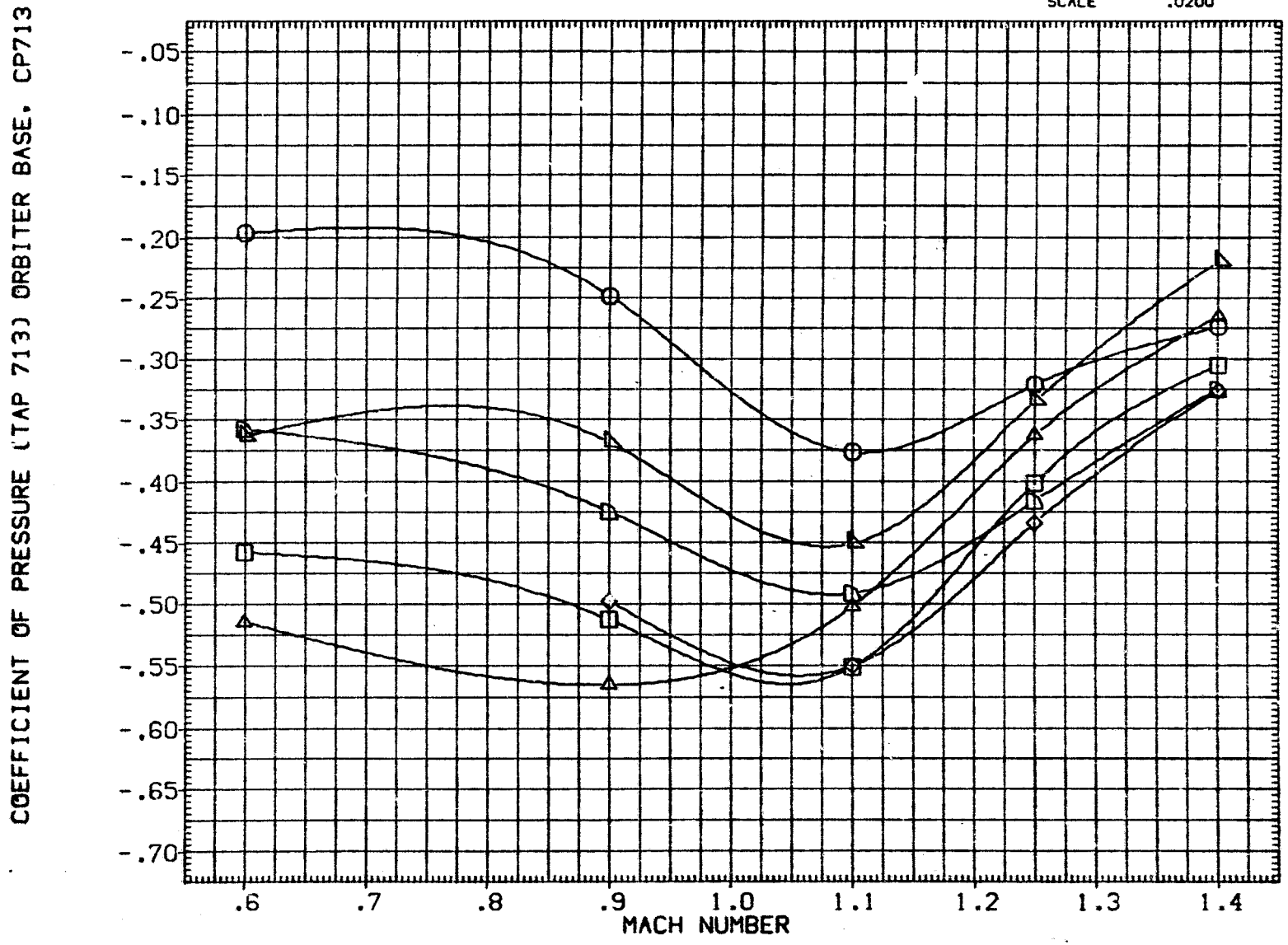



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4028) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

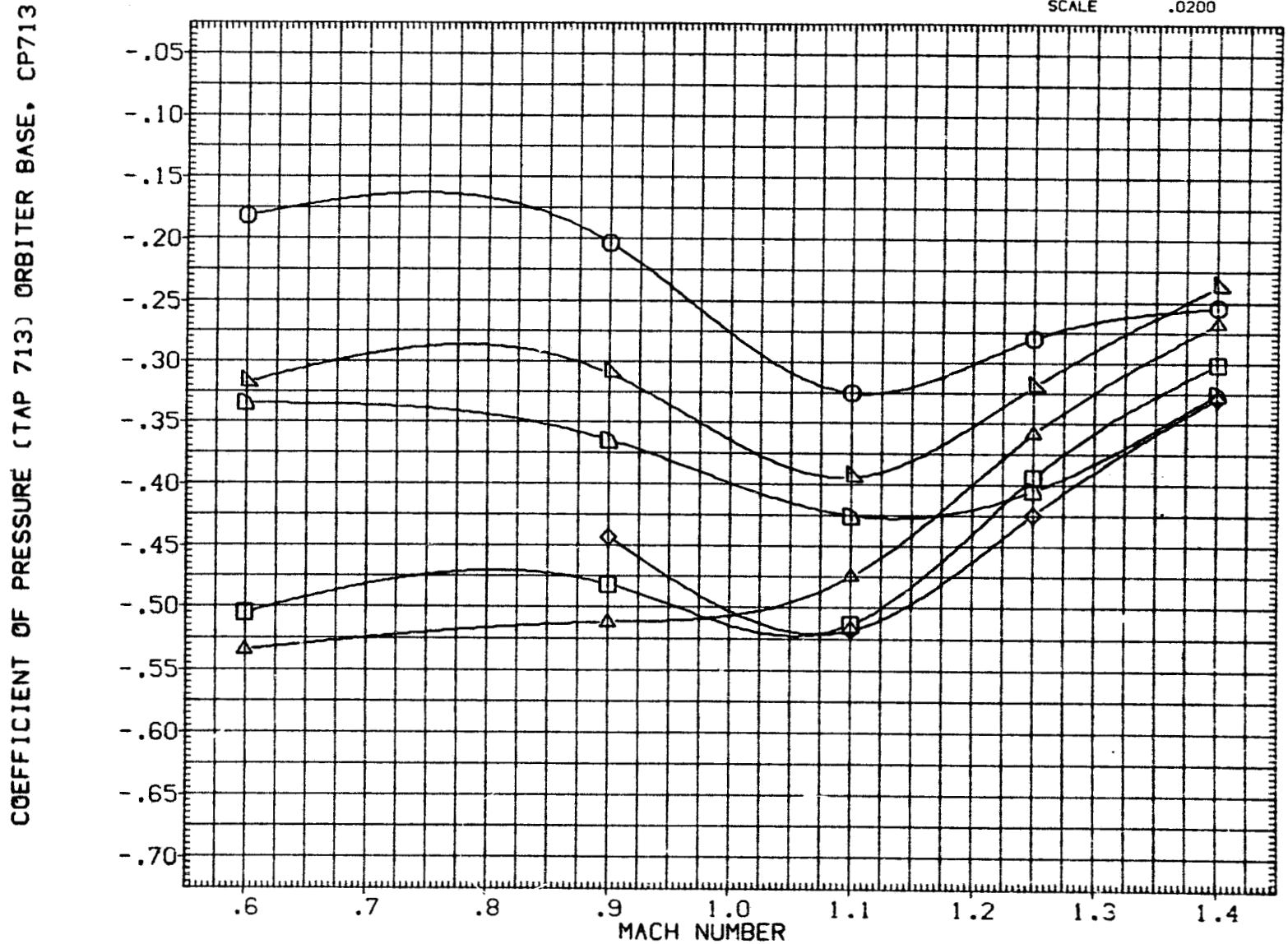



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (FE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (FE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (FE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (FE4080) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (FE4085) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

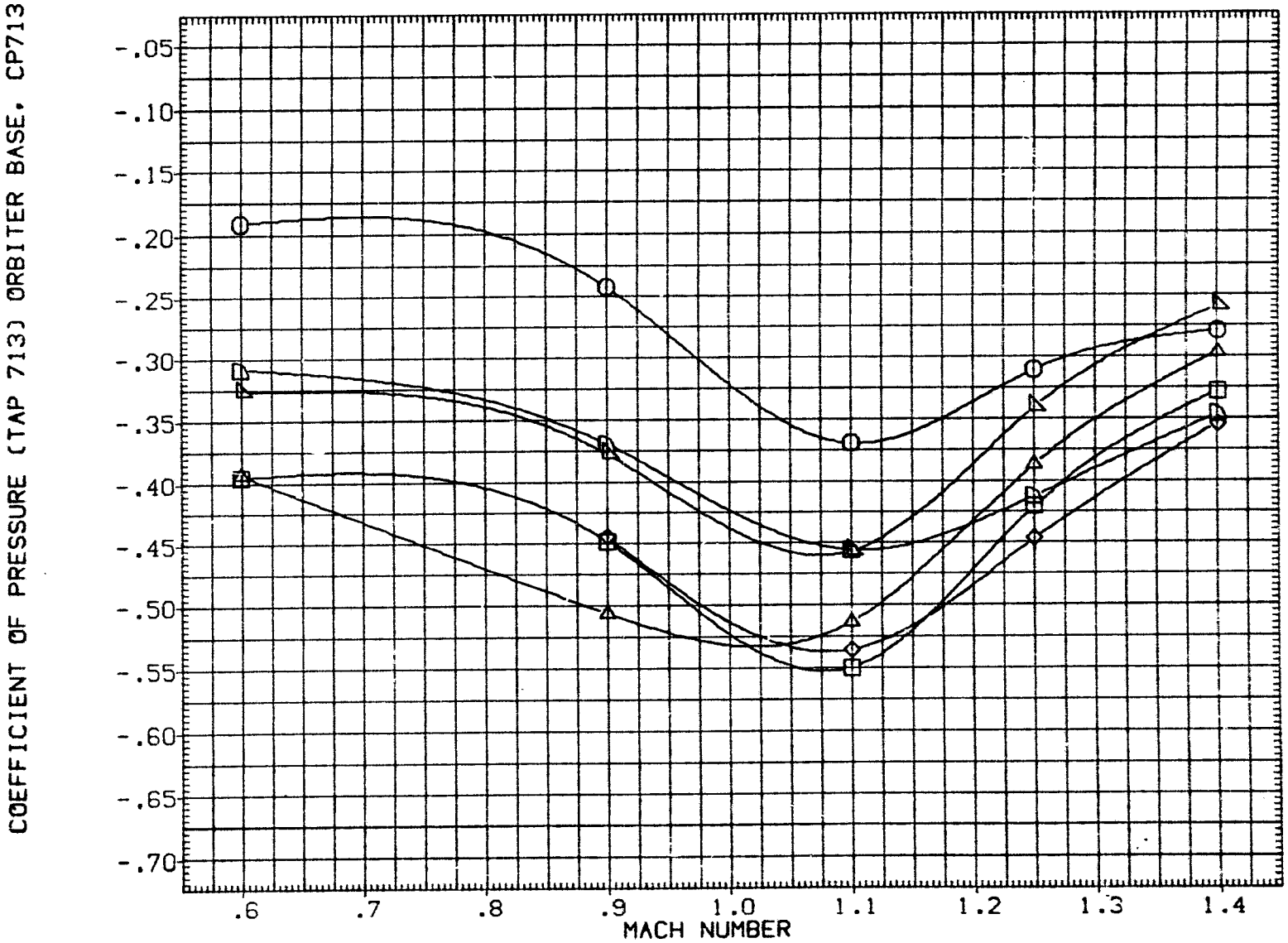



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

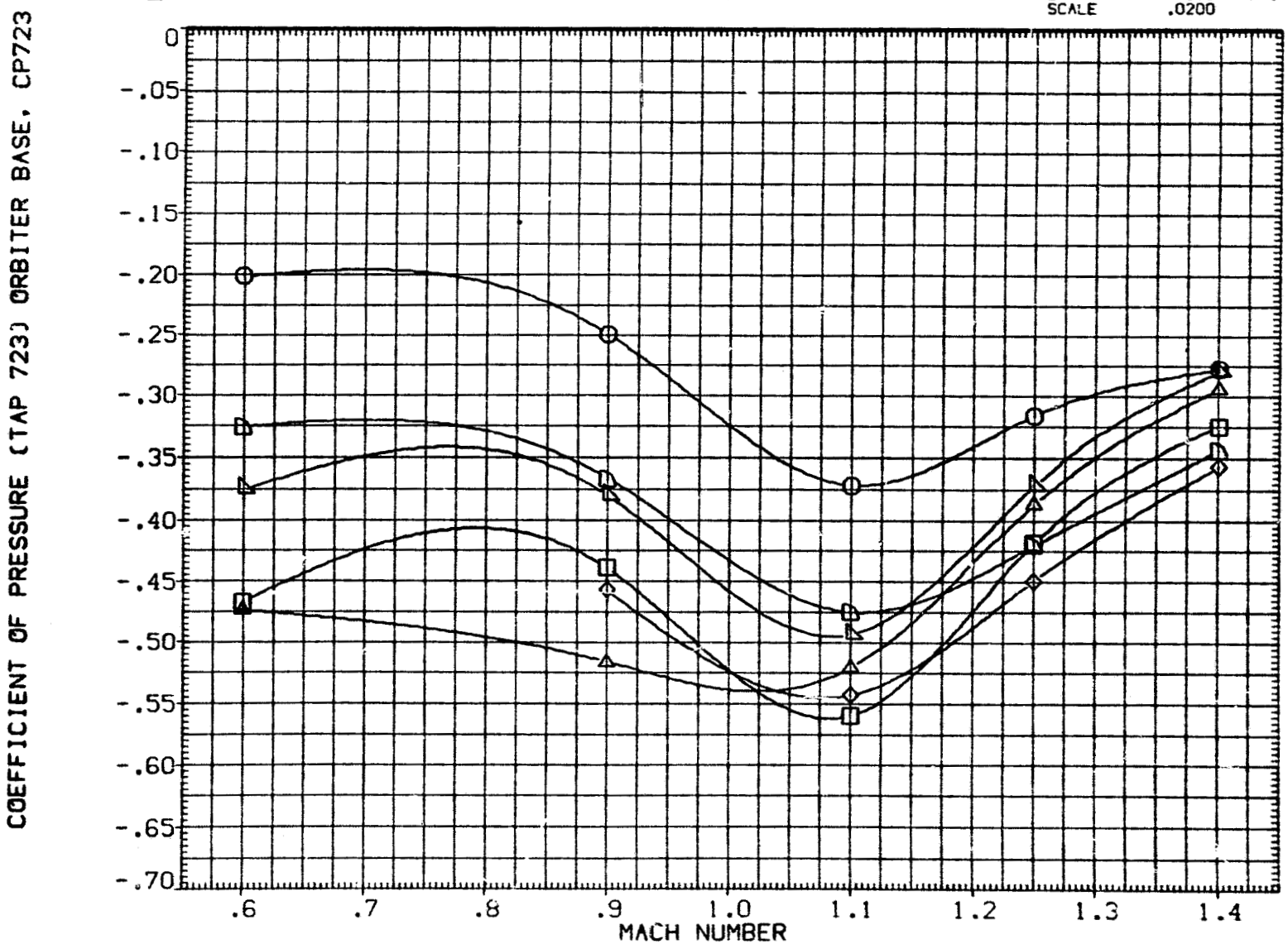



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

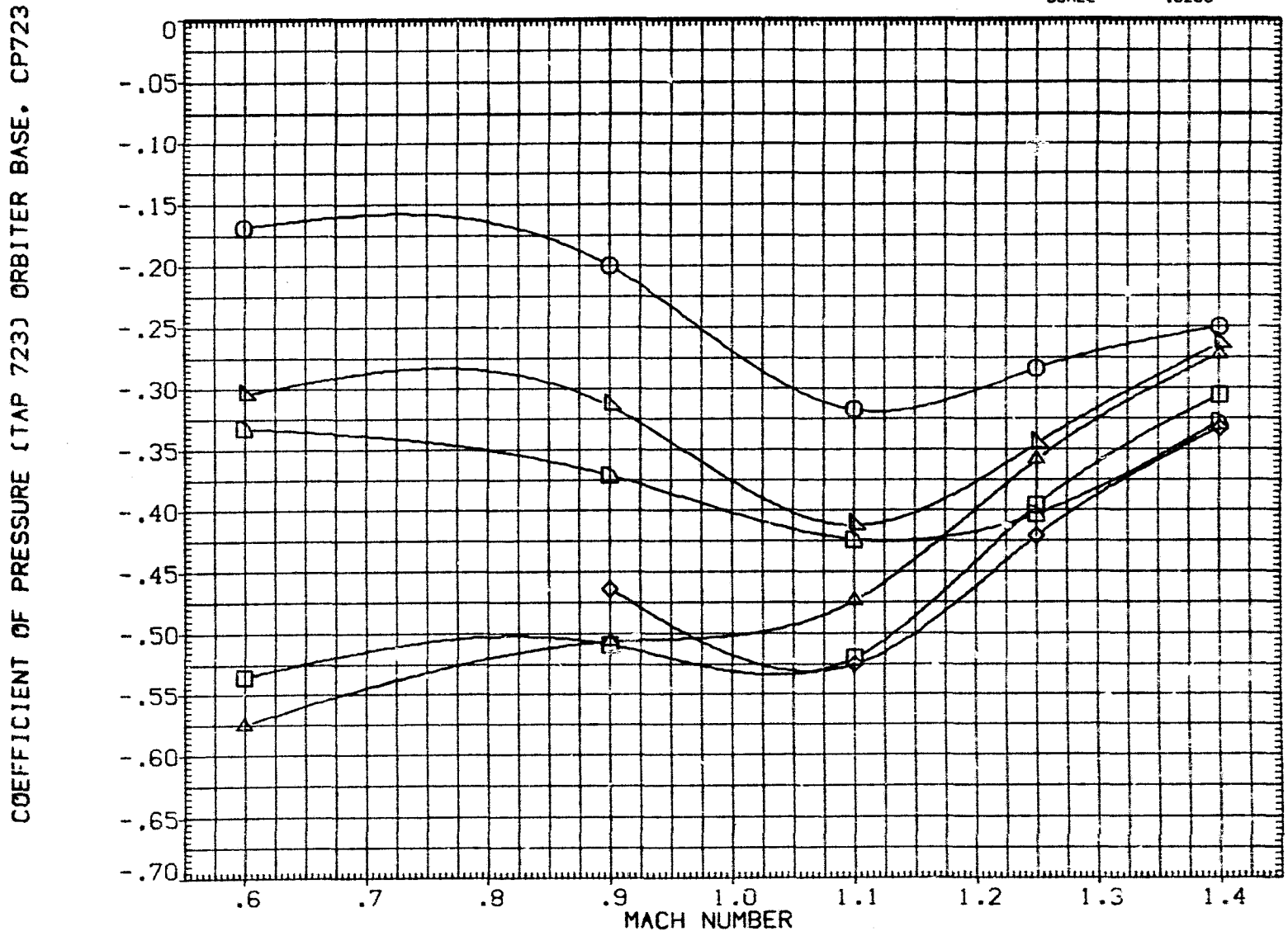



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE40B0) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE40B5) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

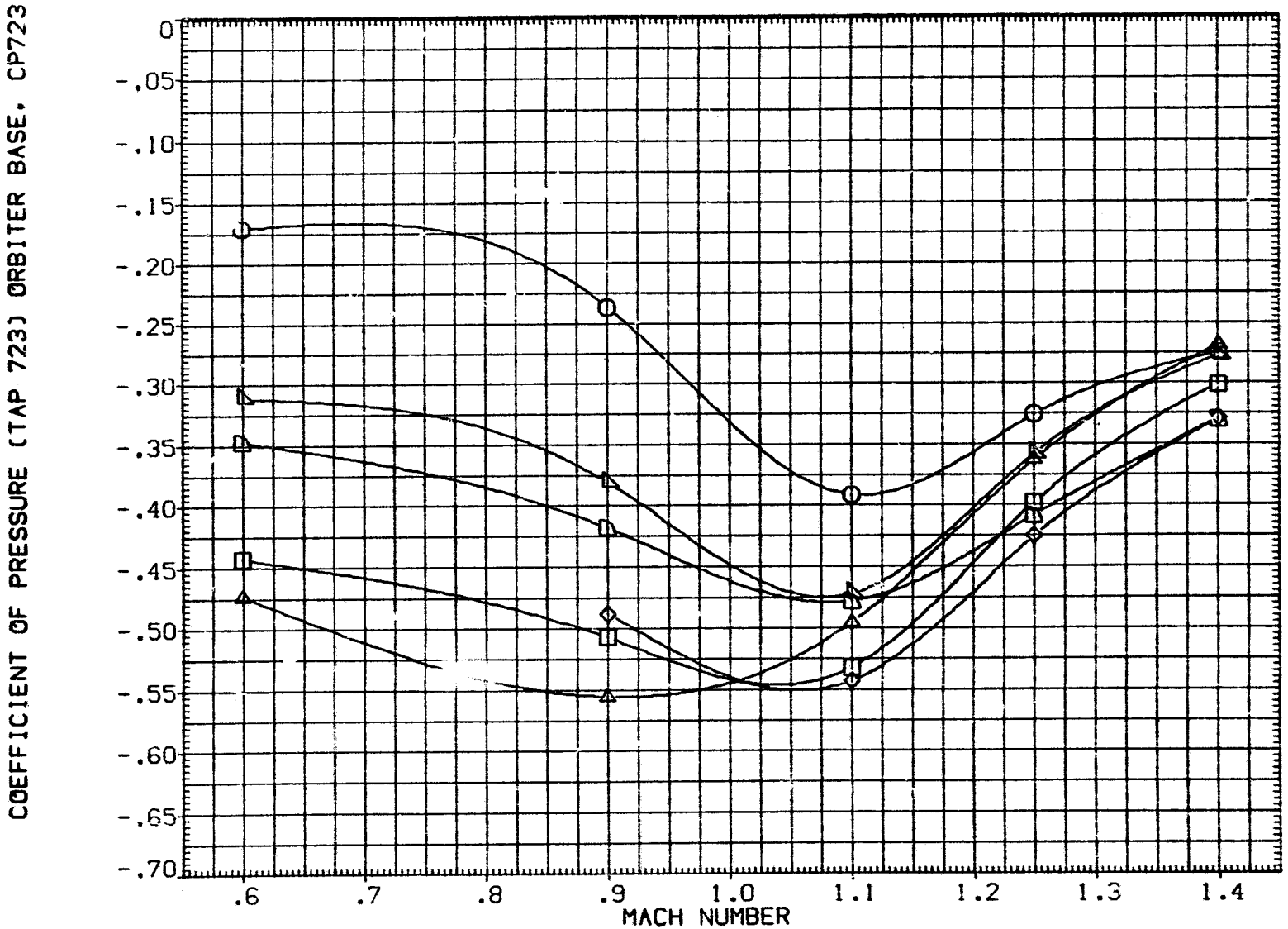



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (GE4028) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE4080) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE4085) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

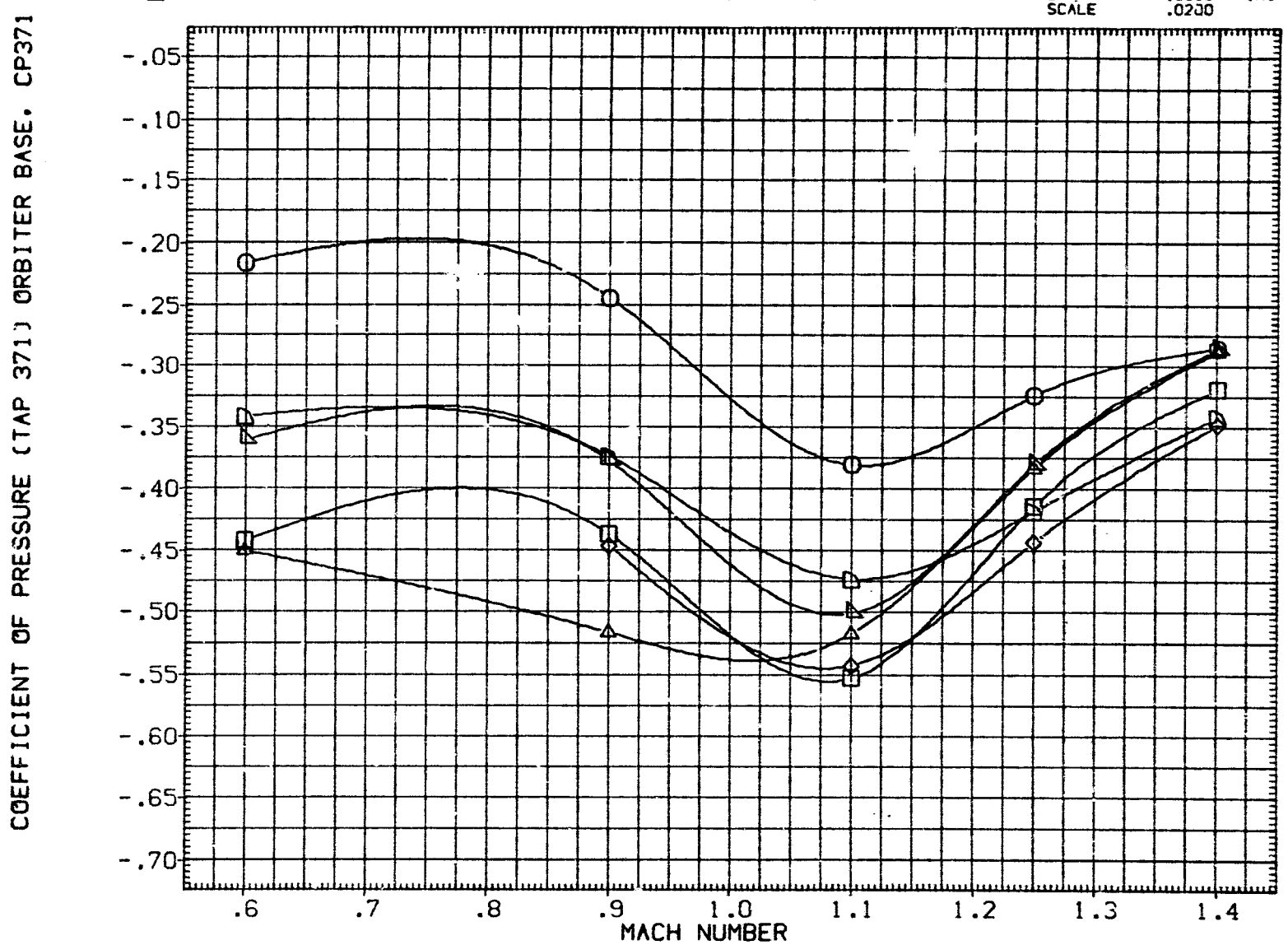



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | □ | ARC 11-023 IA80 OTS SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE40B0) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE40B5) | ▷ | ARC 11-023 IA80 OTS (S .OM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

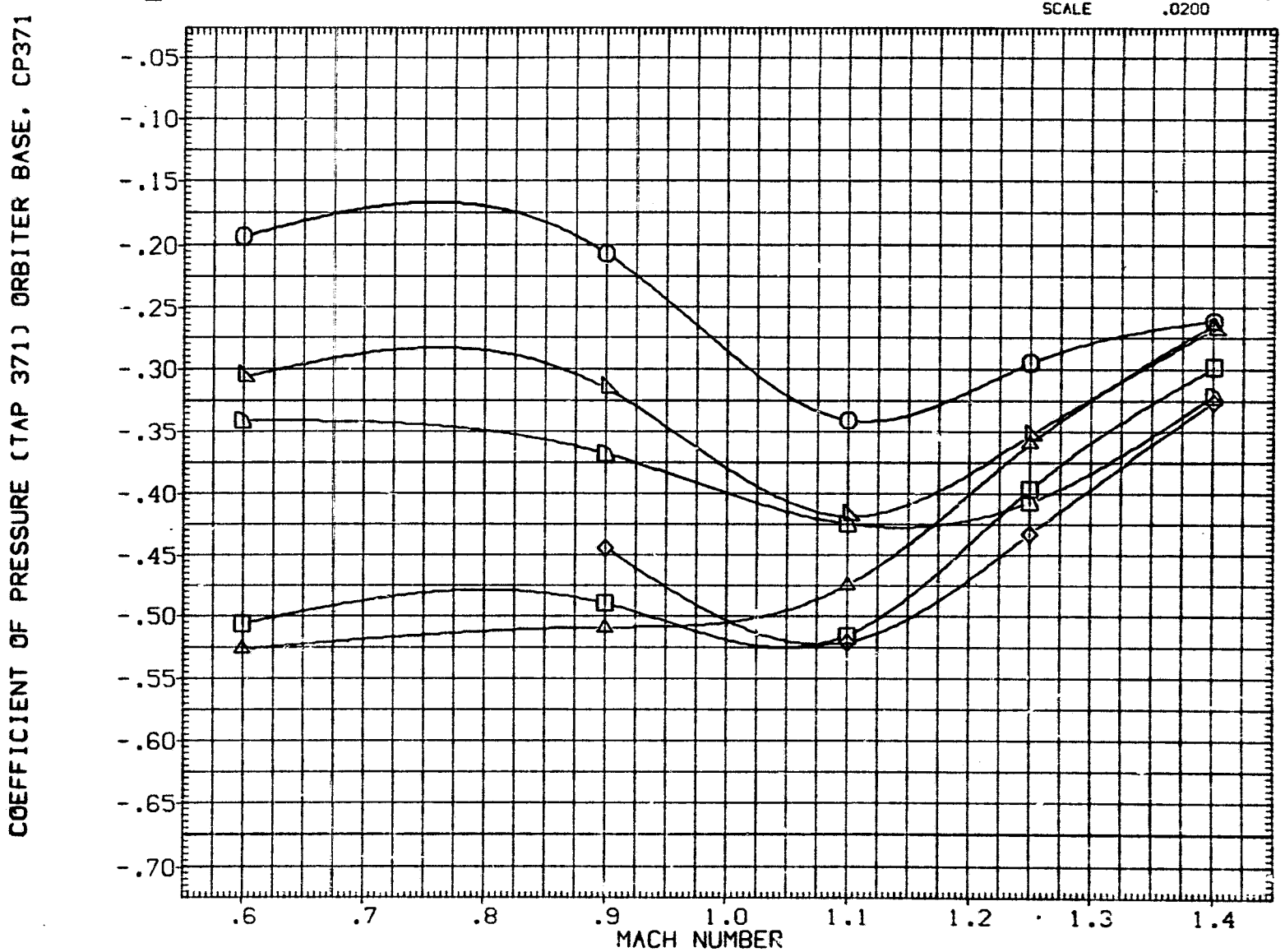



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

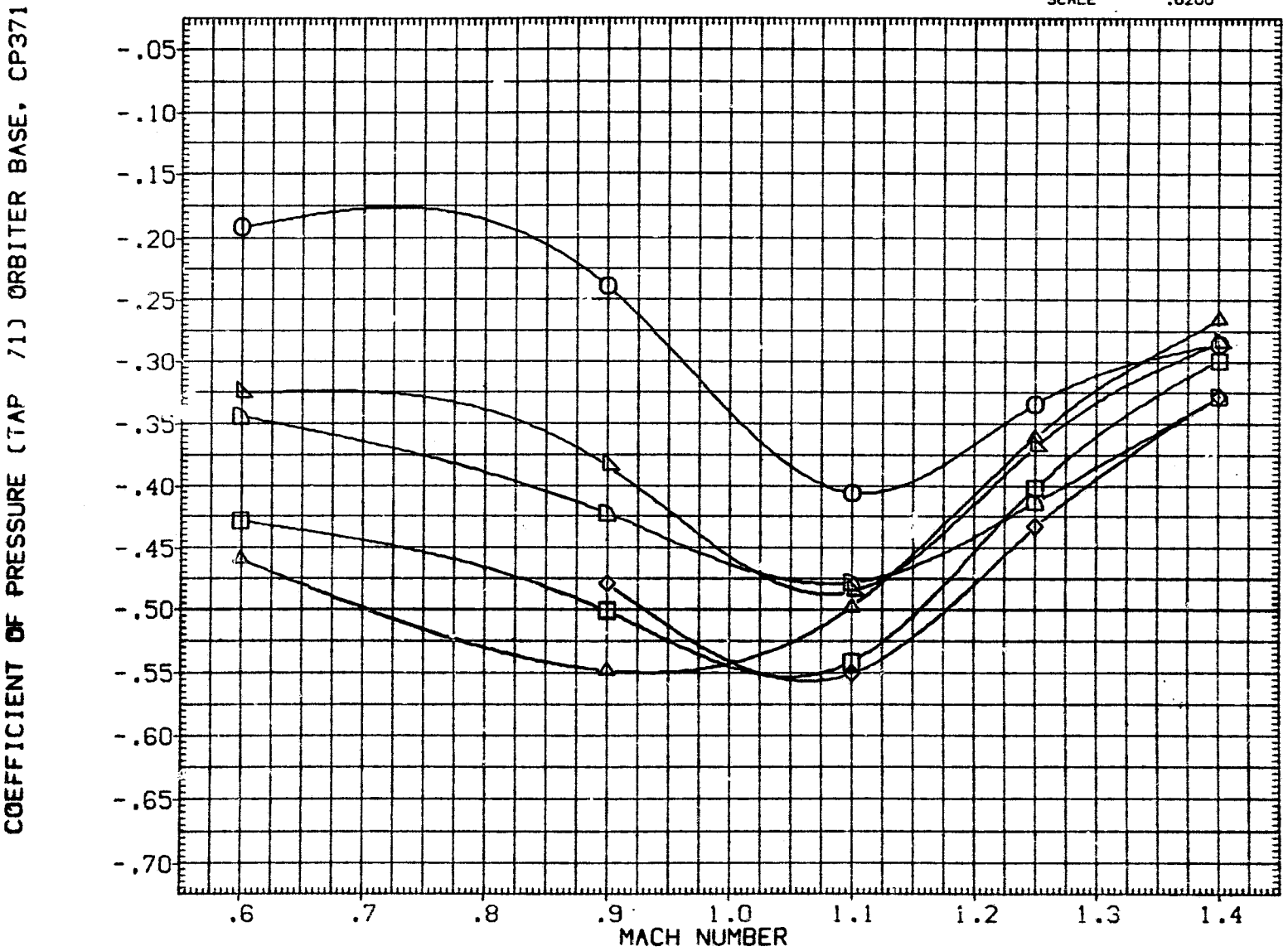



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE4080) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE4085) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

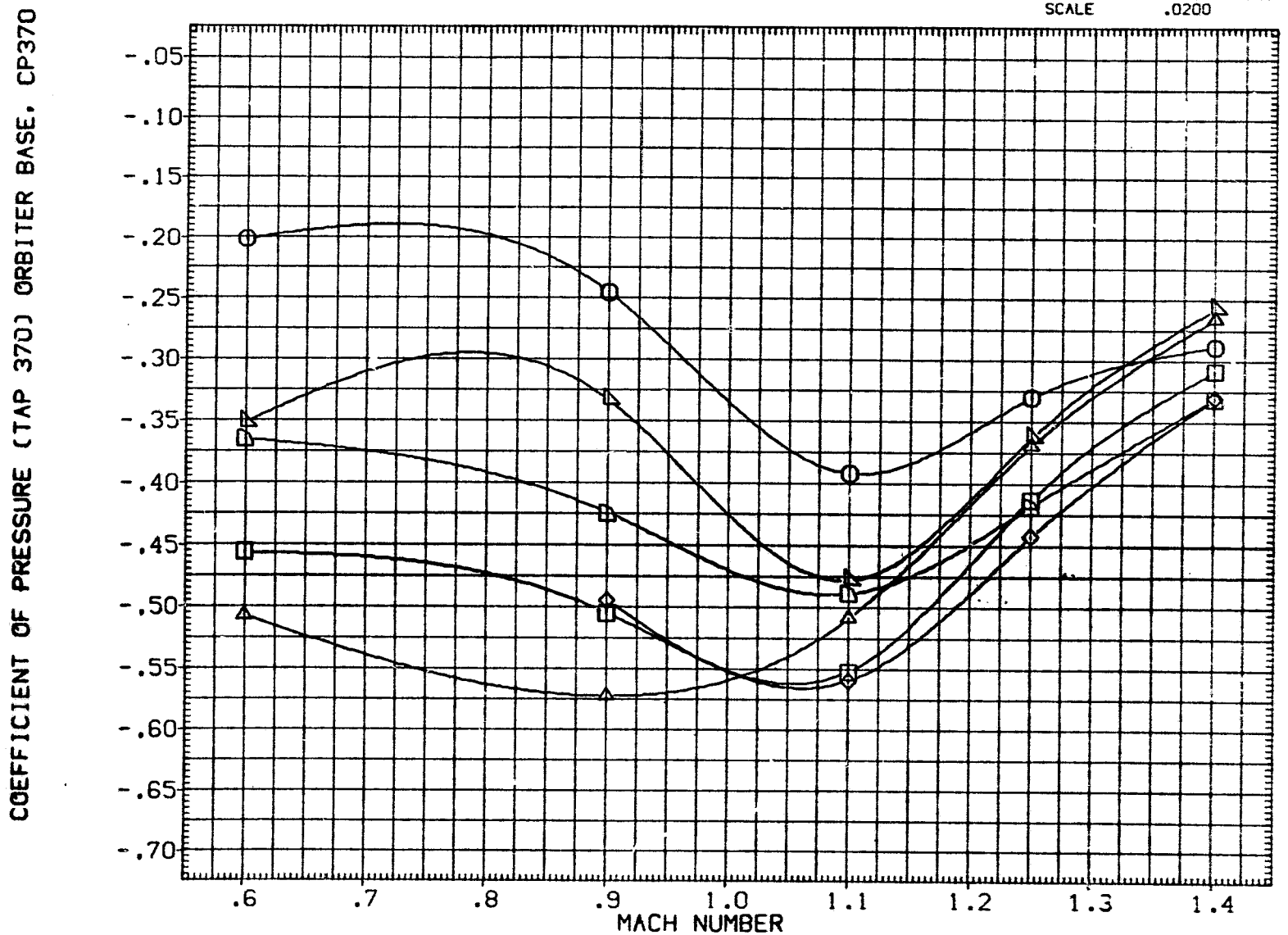



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | □ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | ◇ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | △ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | ▷ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE40RO) | ○ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE4085) | ▽ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

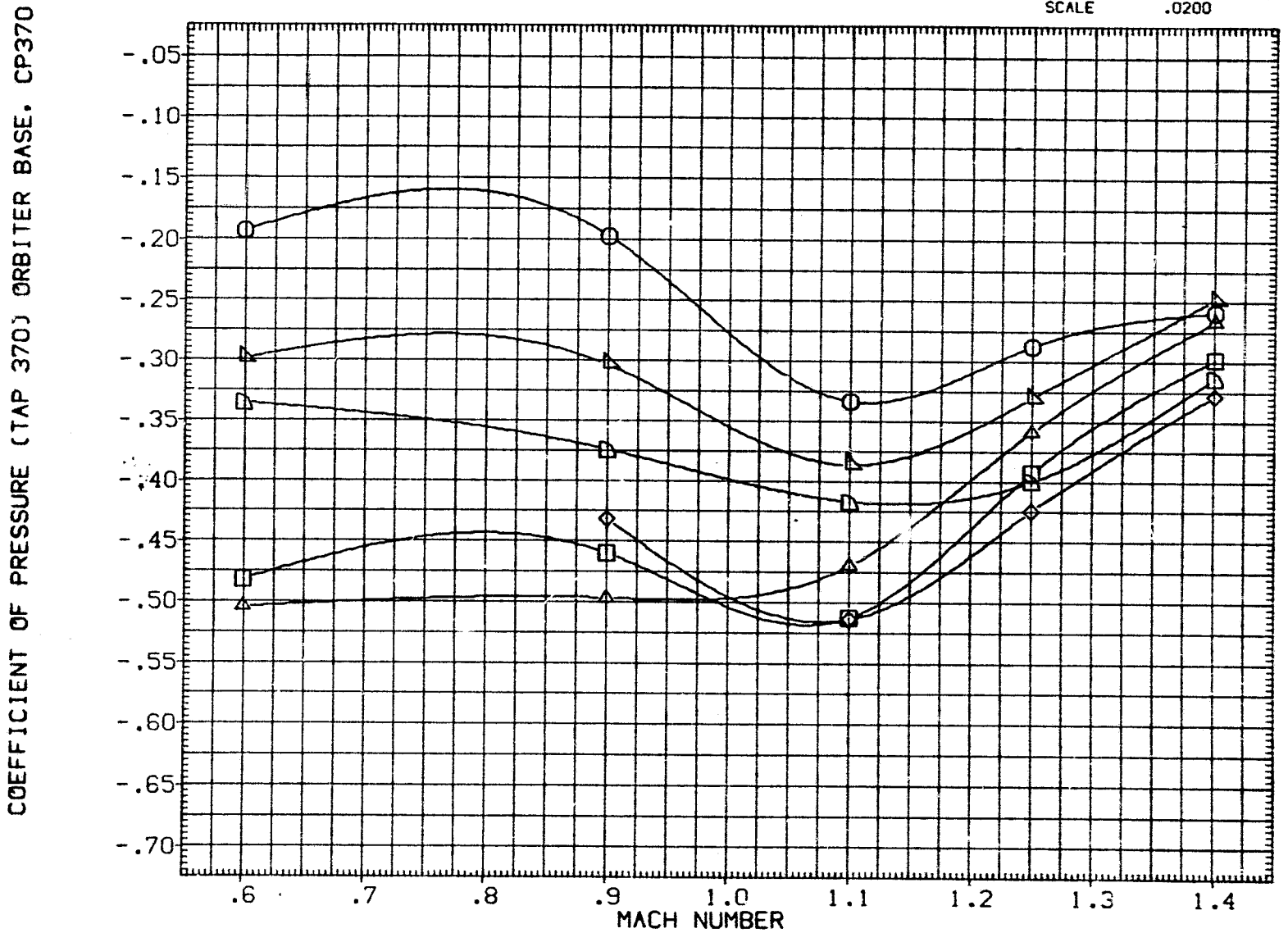



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | | ARC 11-023 IA8Q OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | | ARC 11-023 IA8Q OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | | ARC 11-023 IA8Q OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | | ARC 11-023 IA8Q OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE4080) | | ARC 11-023 IA8Q OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE4085) | | ARC 11-023 IA8Q OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

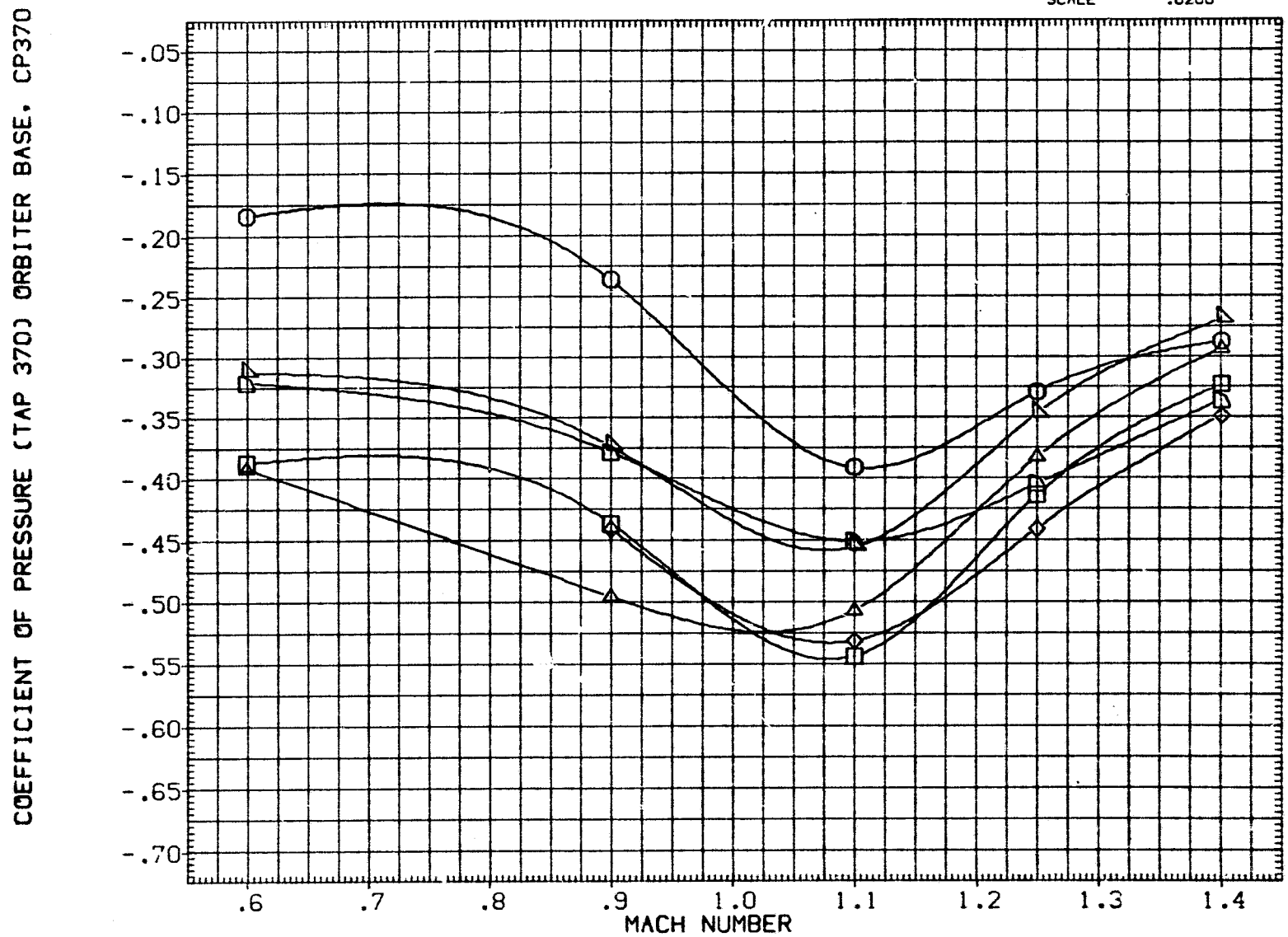



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE4085) | ⬠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

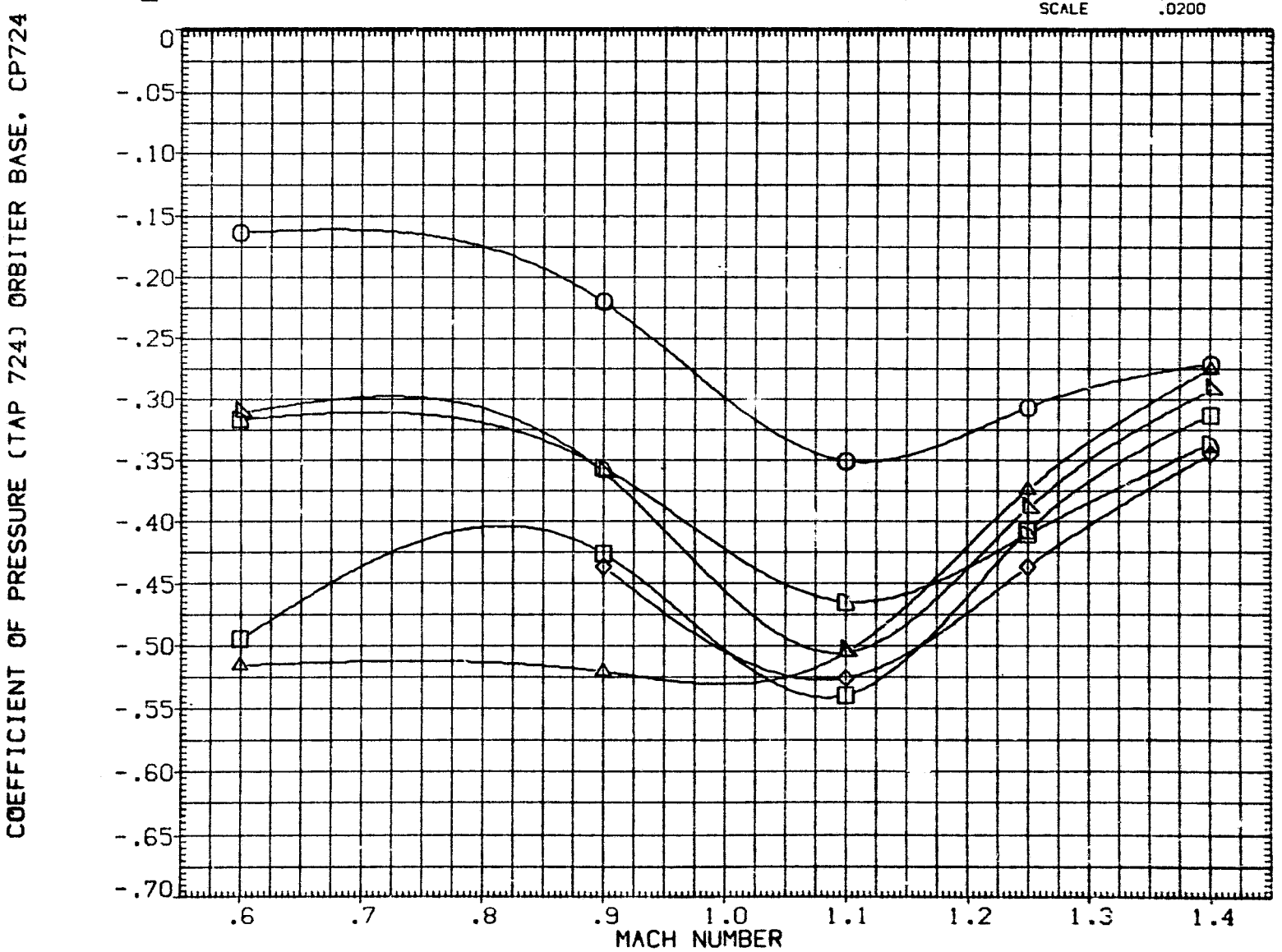



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A)BETA = -4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE4080) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE4085) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

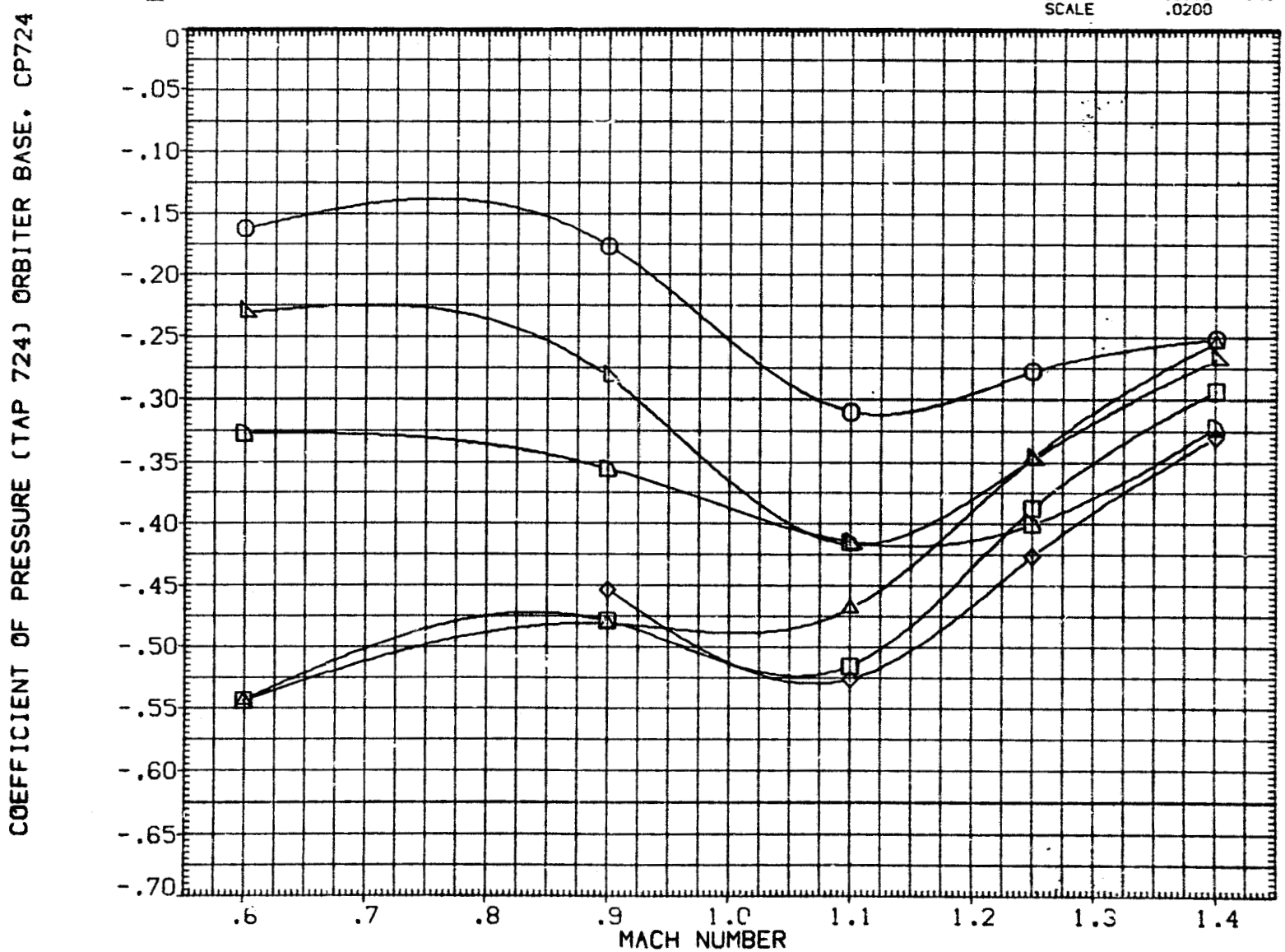



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4028) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | .000 |
| (GE4020) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | .000 |
| (GE4016) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | .000 |
| (GE4011) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | .000 |
| (GE40B0) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | .000 |
| (GE40B5) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | .000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

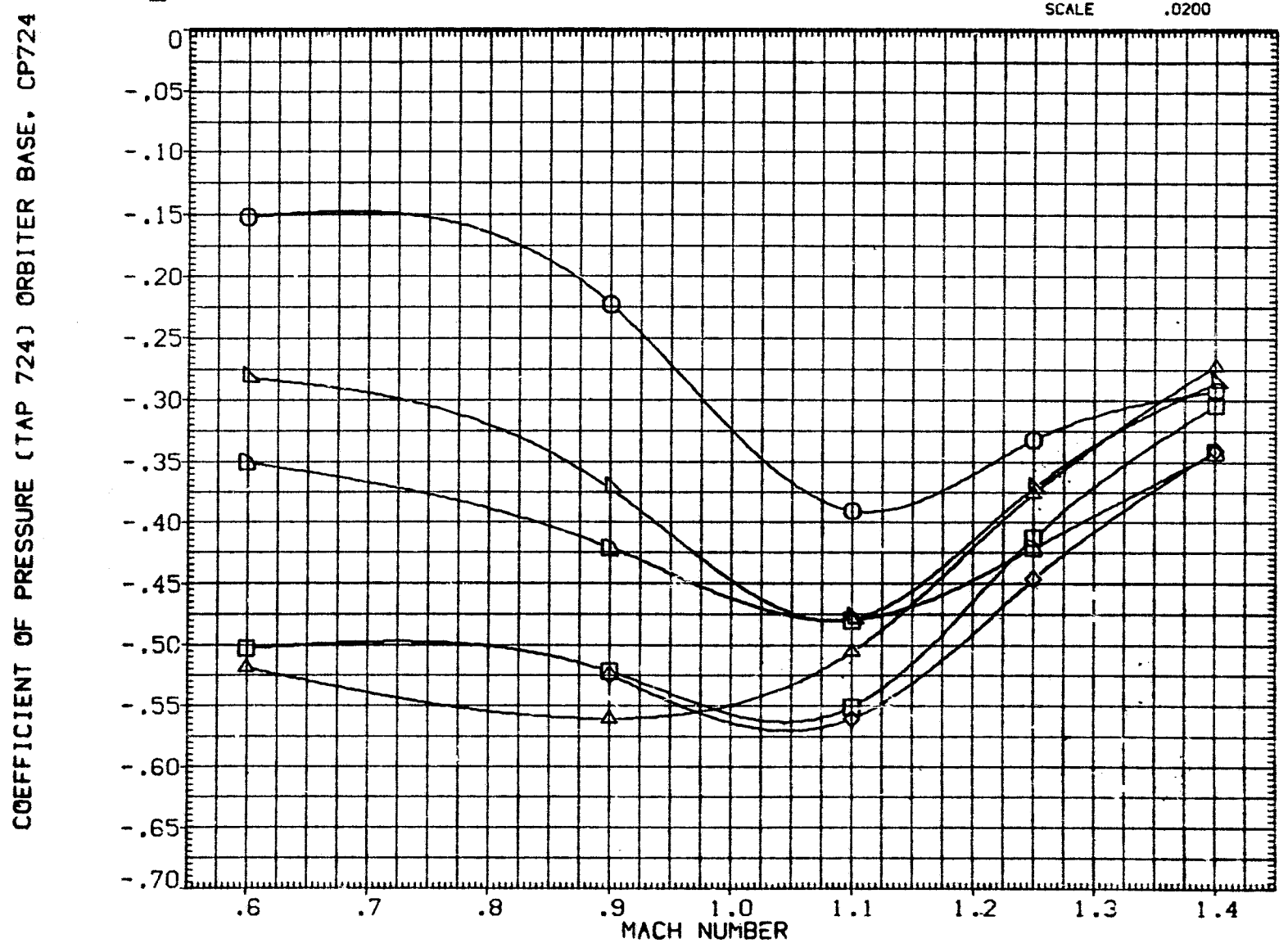



FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4P28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (AE4P20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (AE4P16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (AE4P11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (AE4P80) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (AE4P85) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

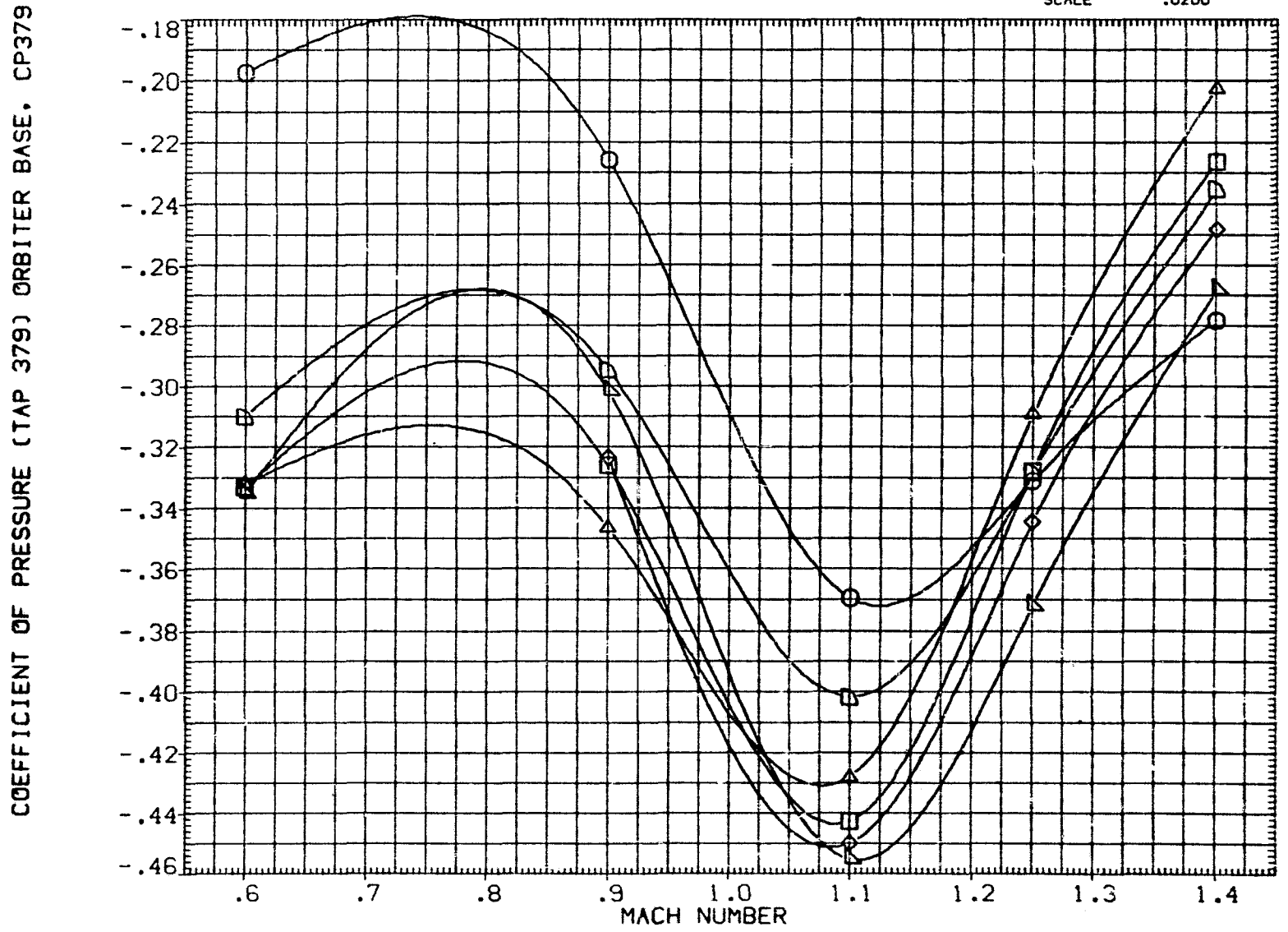



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

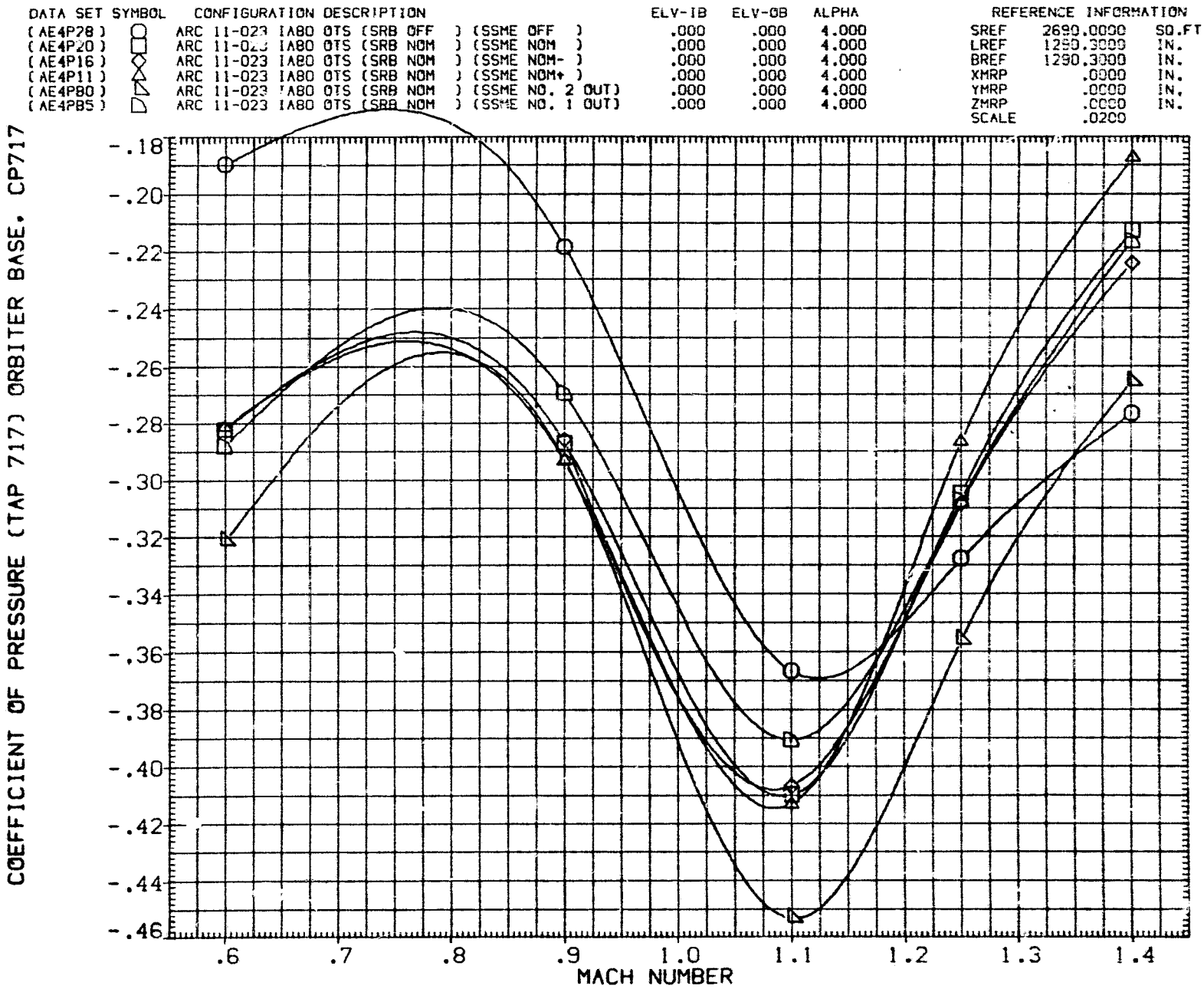



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

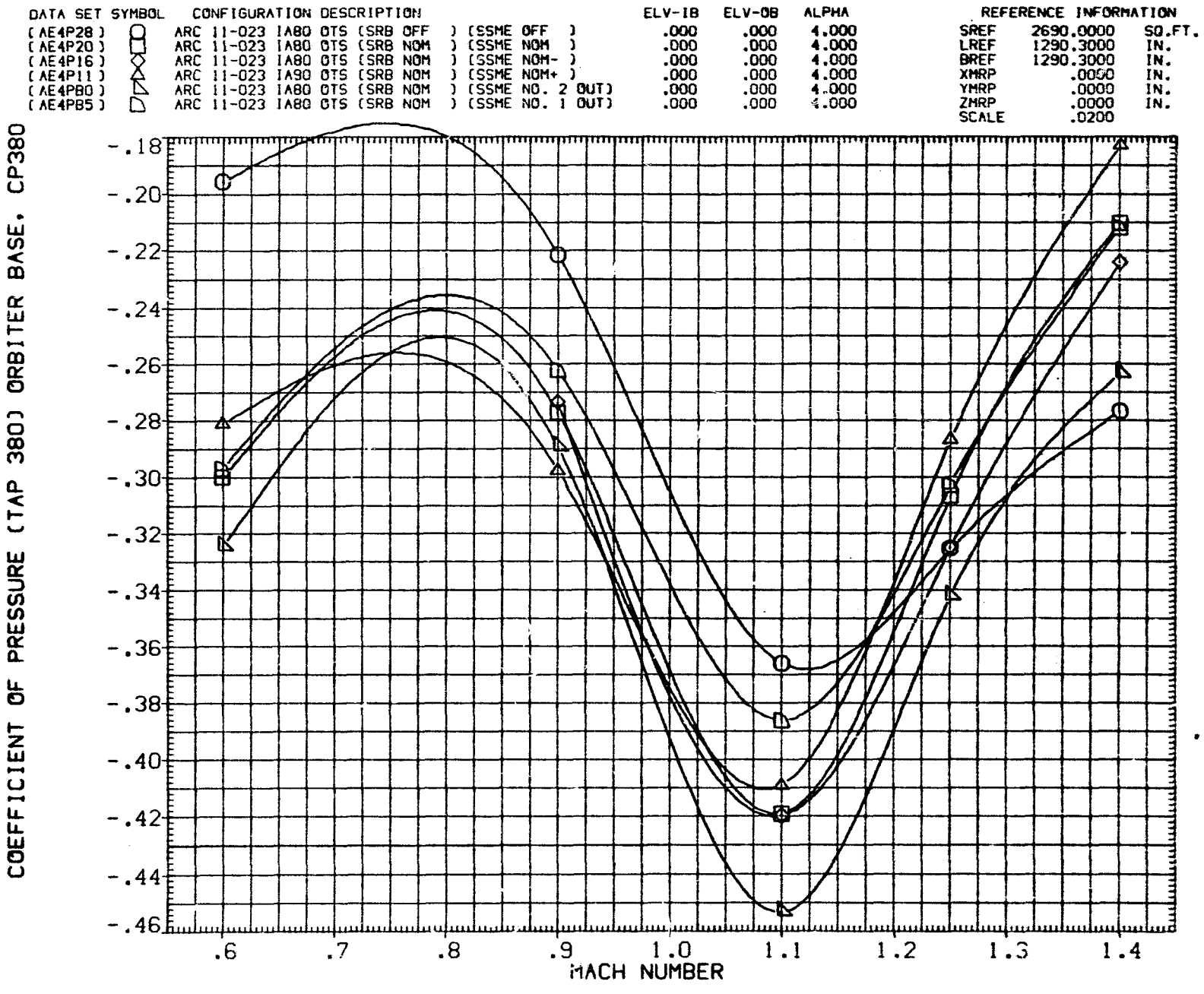



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4P28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (AE4P20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (AE4P16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (AE4P11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (AE4PB0) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (AE4PB5) | ⬠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

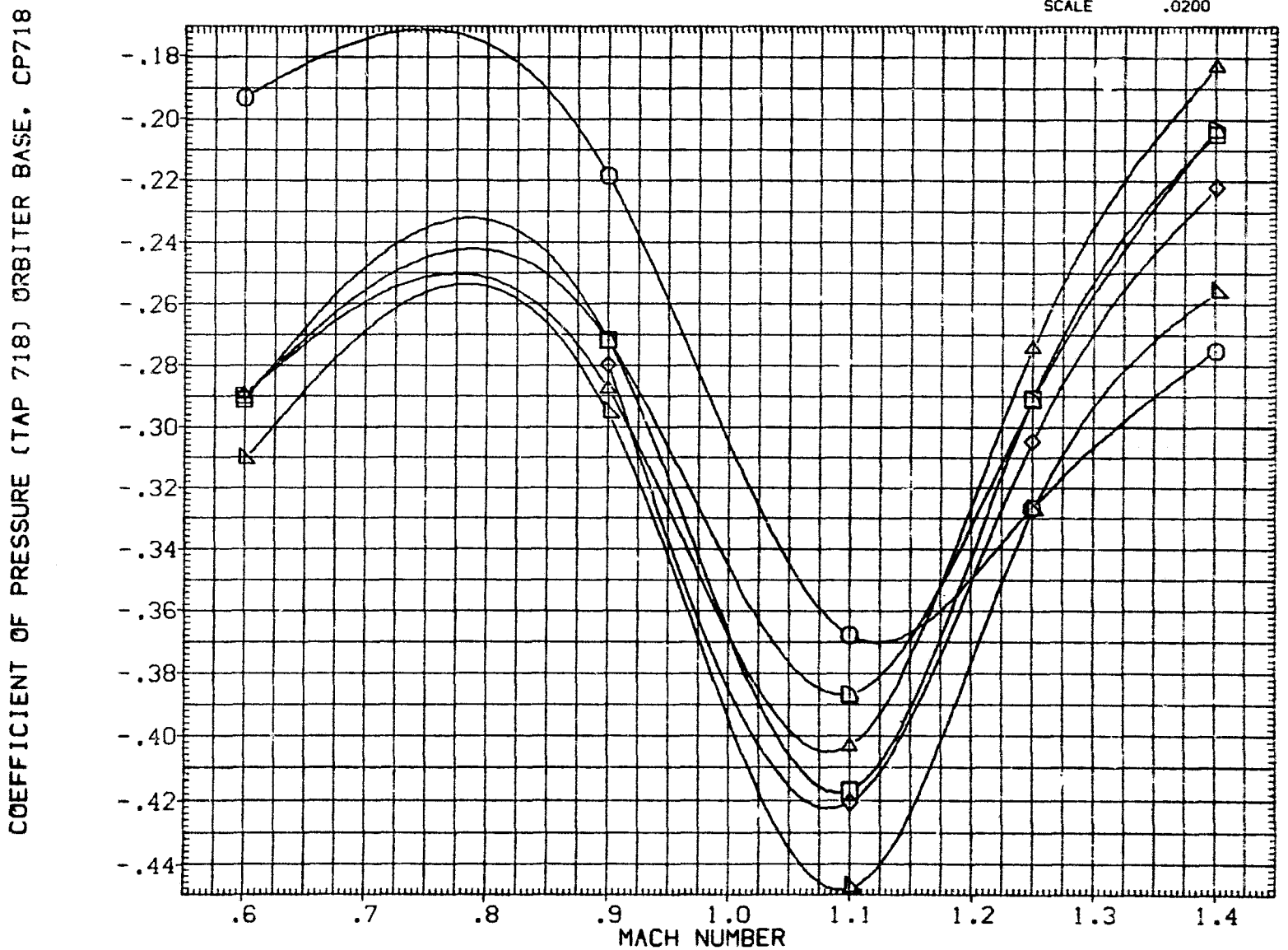



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0°

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4P28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (AE4P20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (AE4P16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (AE4P11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (AE4PB0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (AE4PB5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

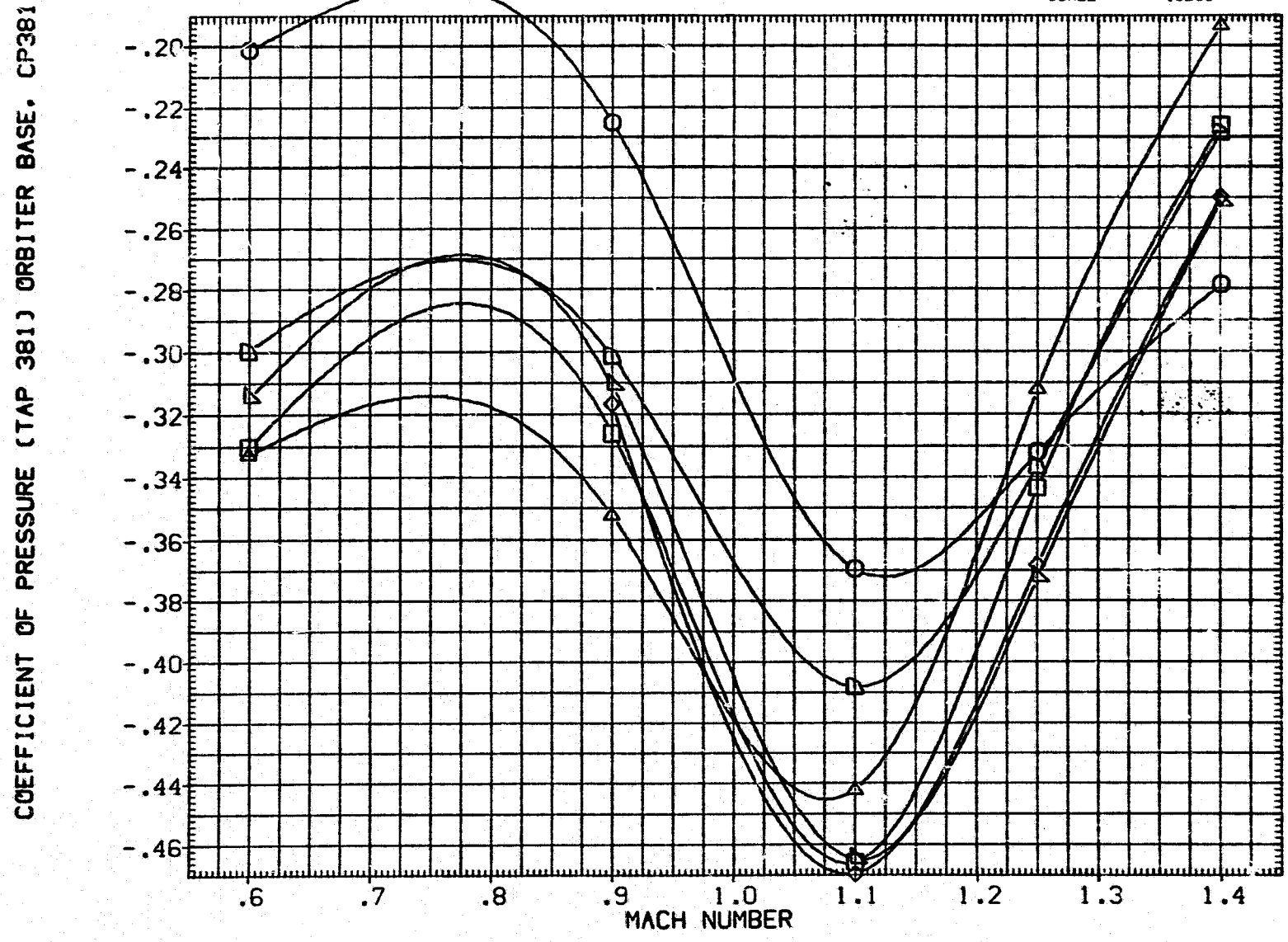



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4P28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (AE4P20) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (AE4P16) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (AE4P11) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (AE4PB0) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (AE4PB5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

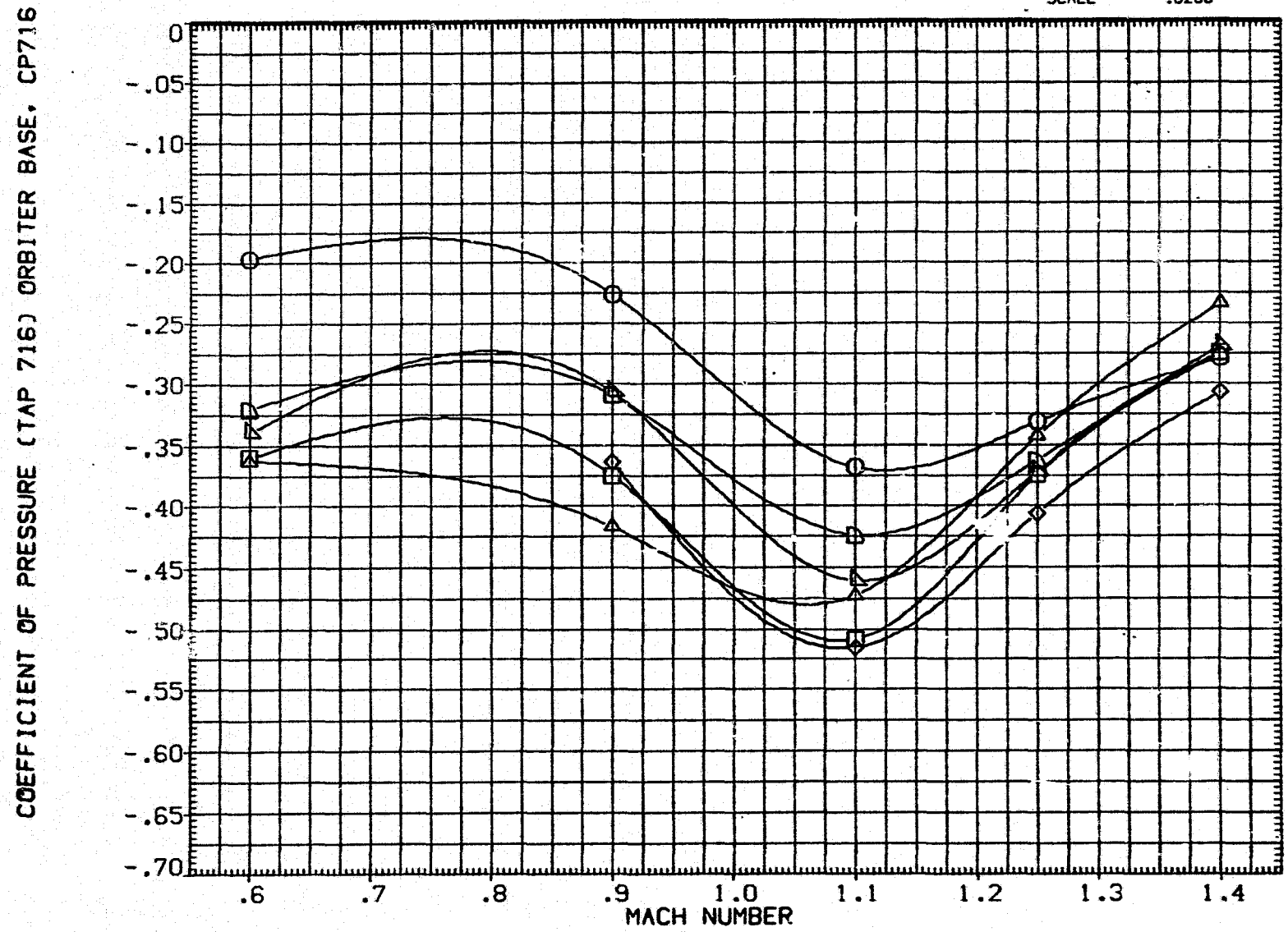



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4P28) | ○ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (AE4P20) | □ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (AE4P16) | ◇ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (AE4P11) | △ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (AE4P8O) | ◁ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (AE4P85) | ▷ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

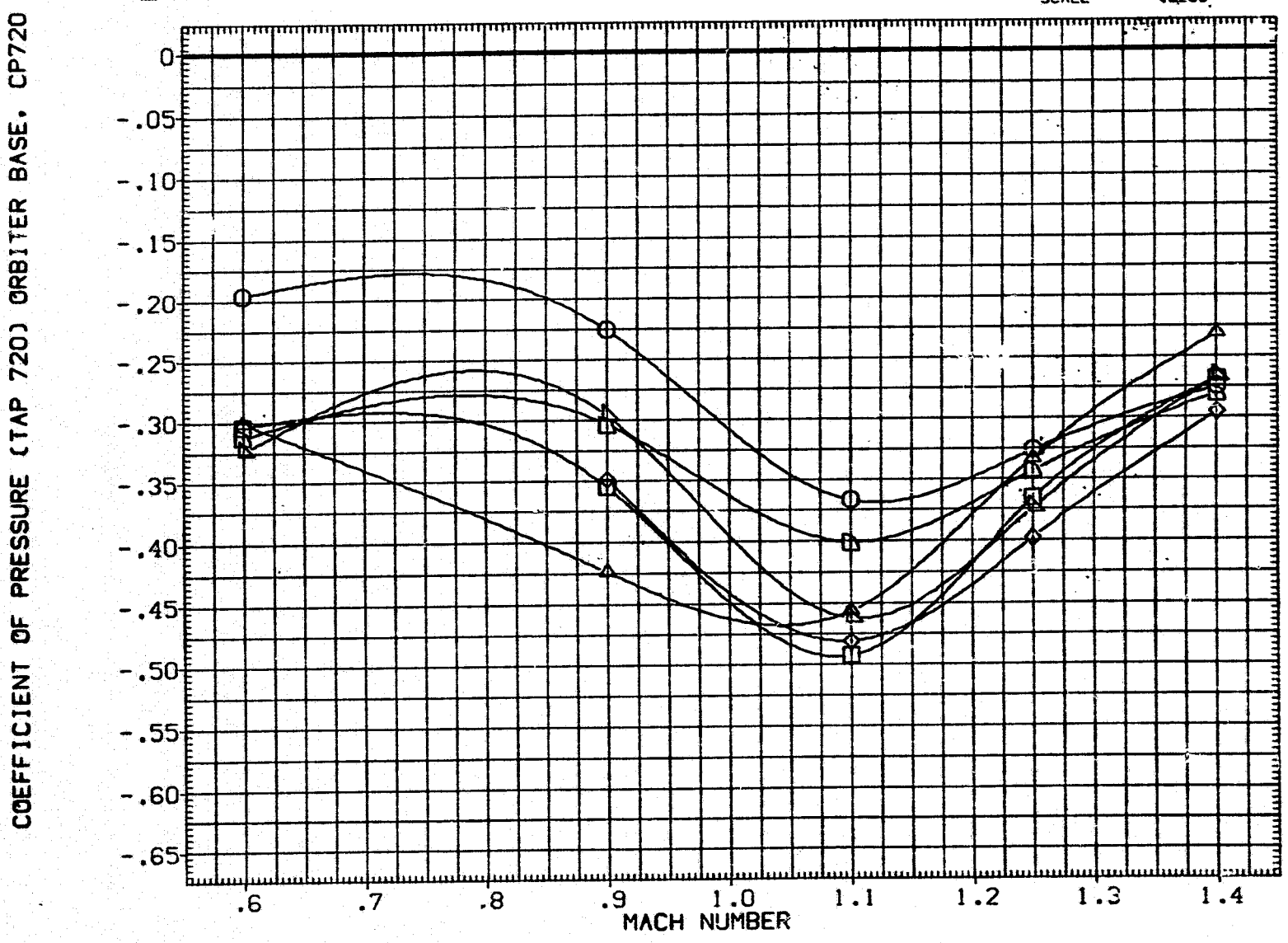



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4P28) | ○ | ARC 11-023 IA8O OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (AE4P20) | □ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (AE4P16) | ◇ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (AE4P11) | △ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (AE4P8O) | ◁ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (AE4P85) | ▷ | ARC 11-023 IA8O OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

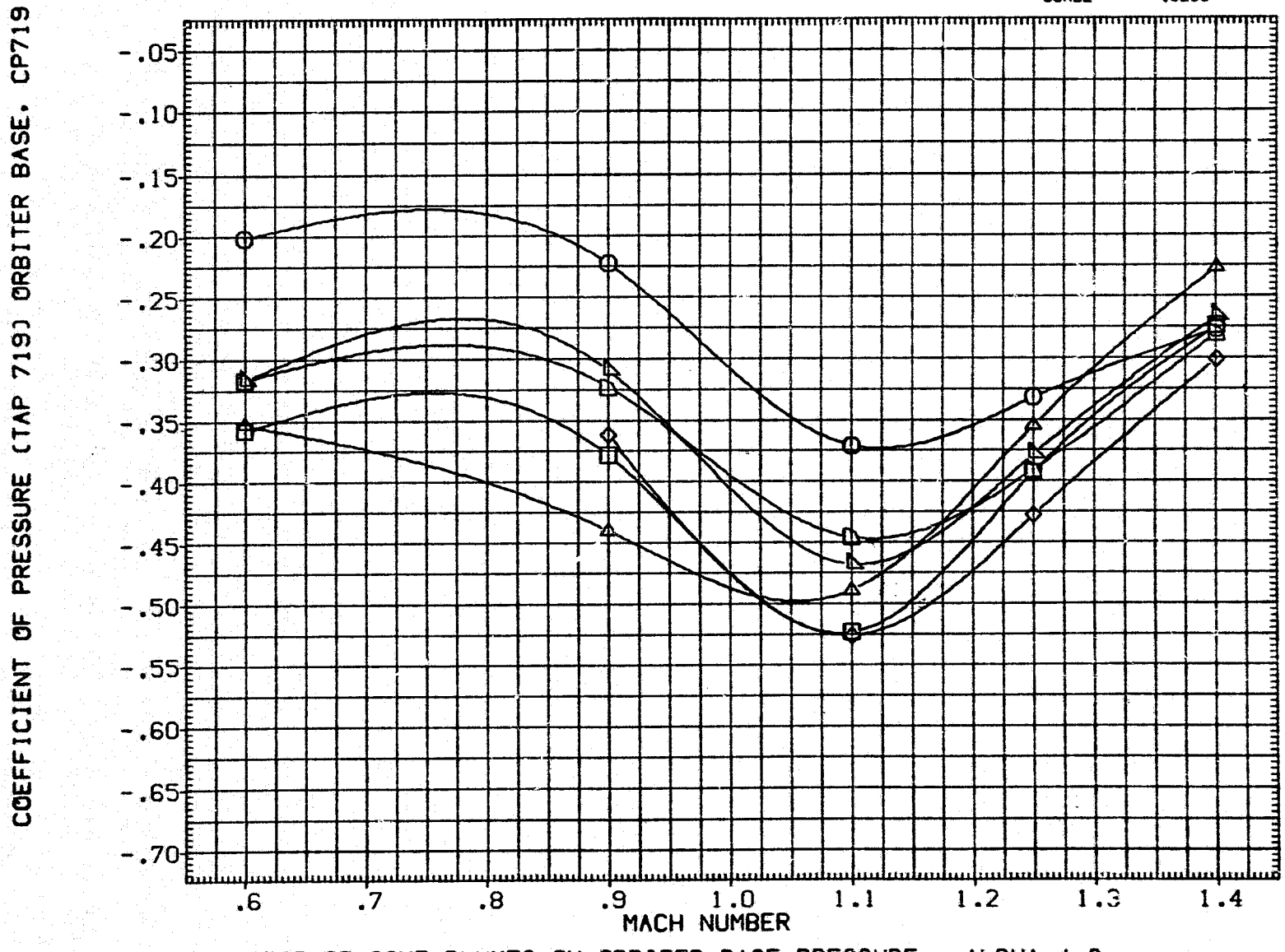



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (AE4P28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (AE4P20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (AE4P16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (AE4P11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (AE4P80) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (AE4P85) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

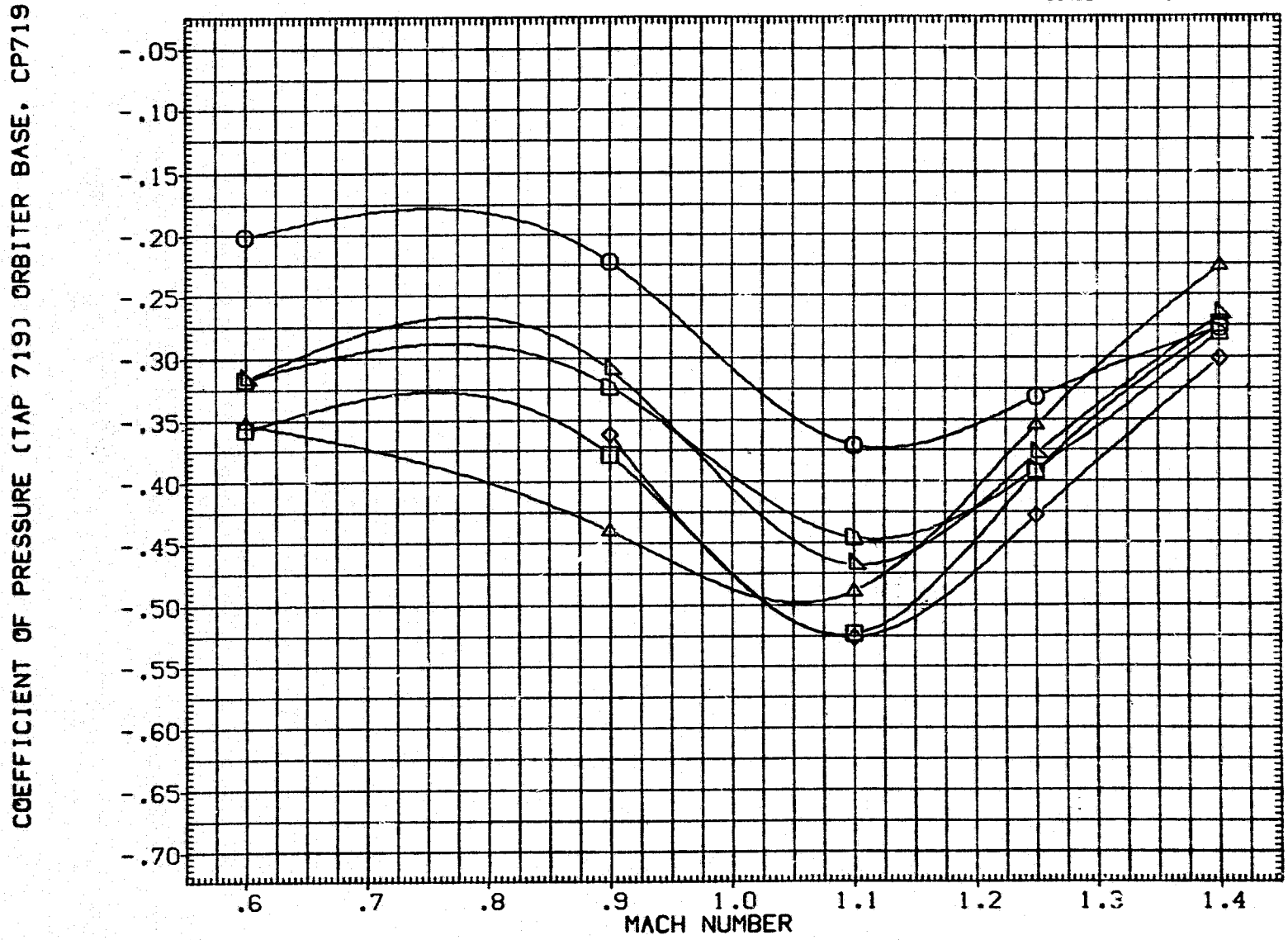



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4P28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (AE4P20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (AE4P16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (AE4P11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (AE4PB0) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (AE4PB5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

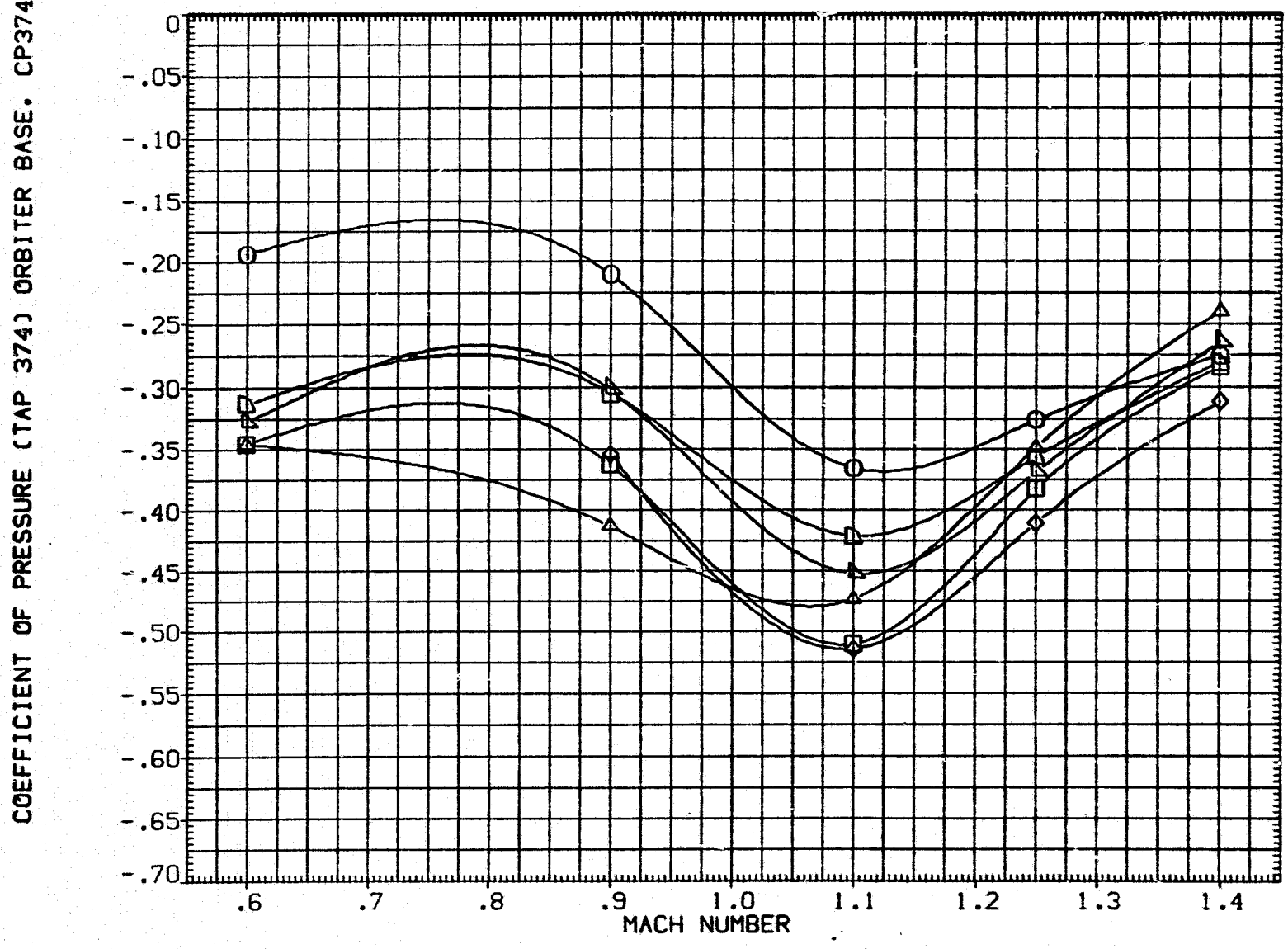



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (AE4P28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (AE4P20) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (AE4P16) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (AE4P11) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (AE4PB0) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (AE4PB5) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

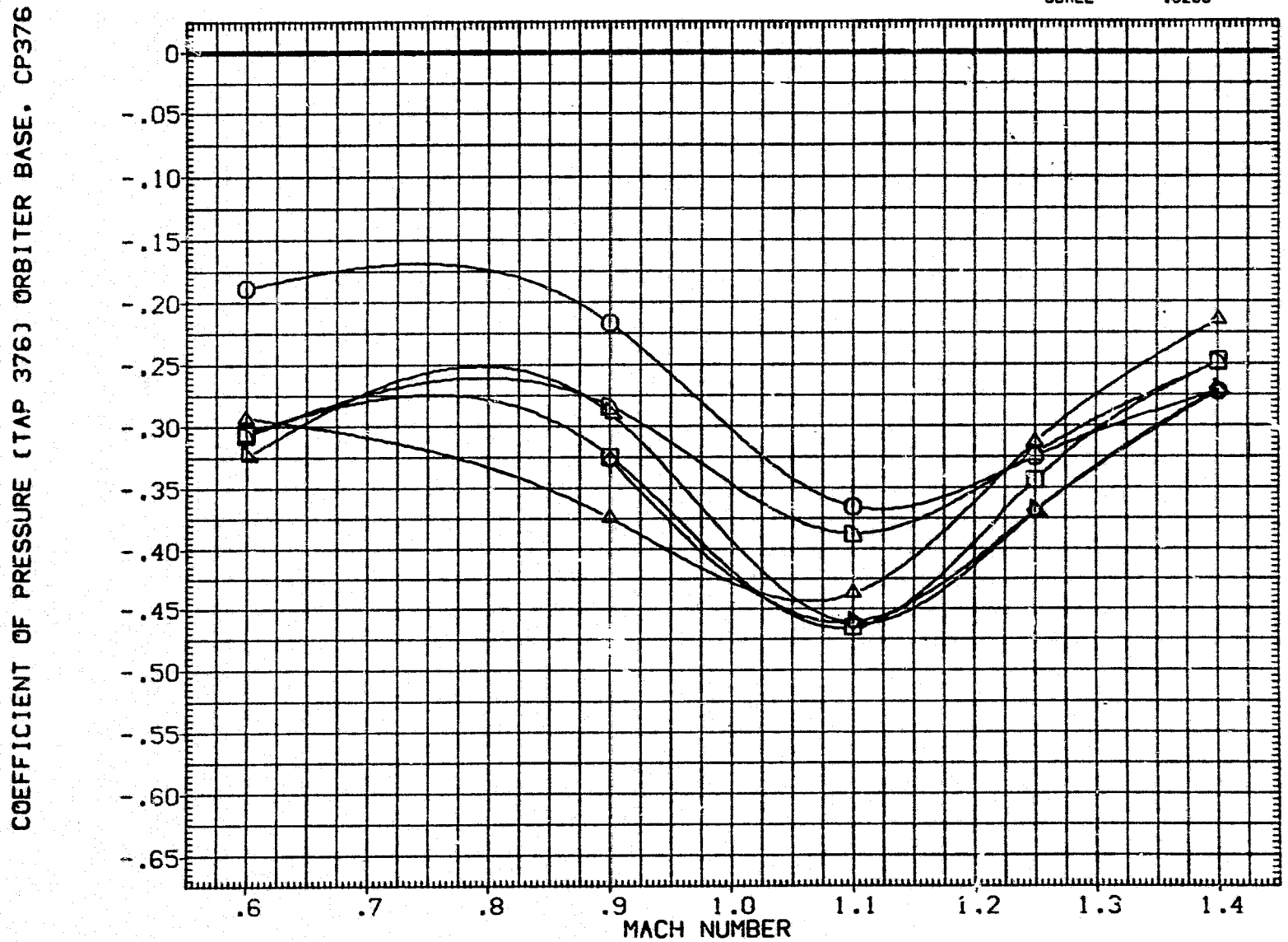



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4P28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (FE4P20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (FE4P16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (FE4P11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (FE4PB0) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (FE4PB5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

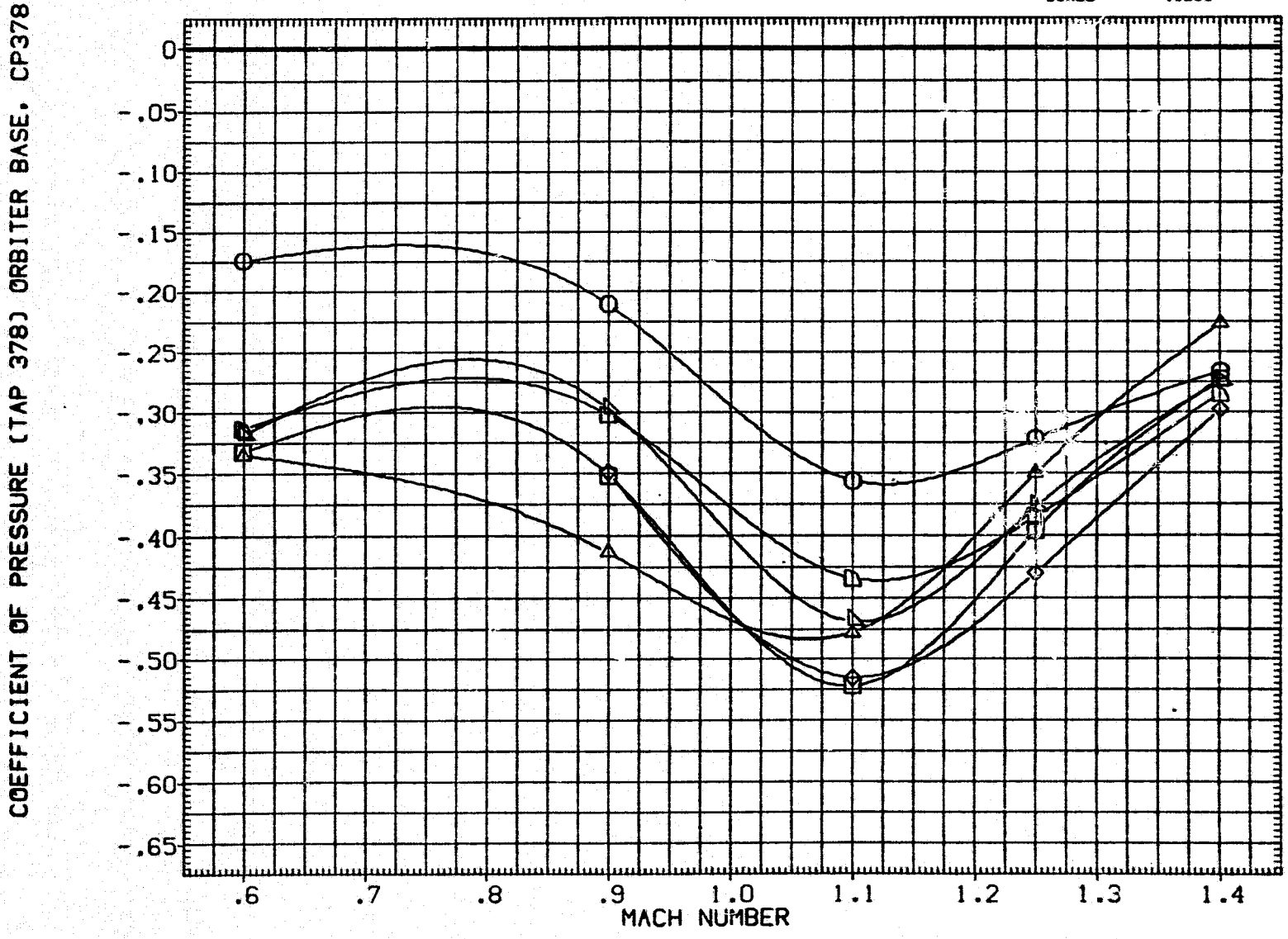



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4P28) | ARC 11-023 IA80 0TS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (FE4P20) | ARC 11-023 IA80 0TS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (FE4P16) | ARC 11-023 IA80 0TS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (FE4P11) | ARC 11-023 IA80 0TS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (FE4PB0) | ARC 11-023 IA80 0TS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (FE4PB5) | ARC 11-023 IA80 0TS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

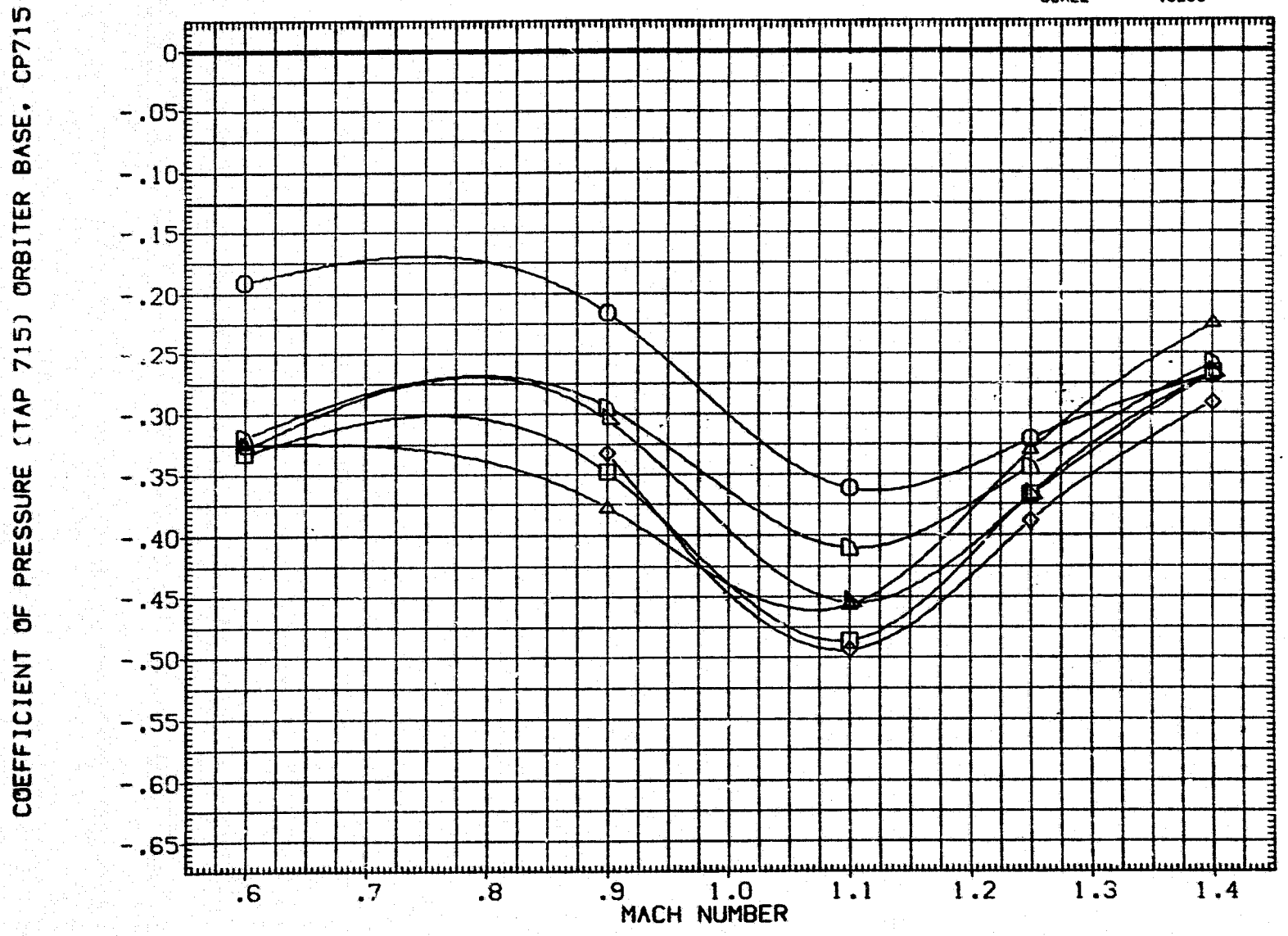



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4P28) | ○ | ARC 11-023 IA8D OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (FE4P20) | □ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (FE4P16) | ◇ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (FE4P11) | △ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (FE4P80) | ▽ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (FE4P85) | ▷ | ARC 11-023 IA8D OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

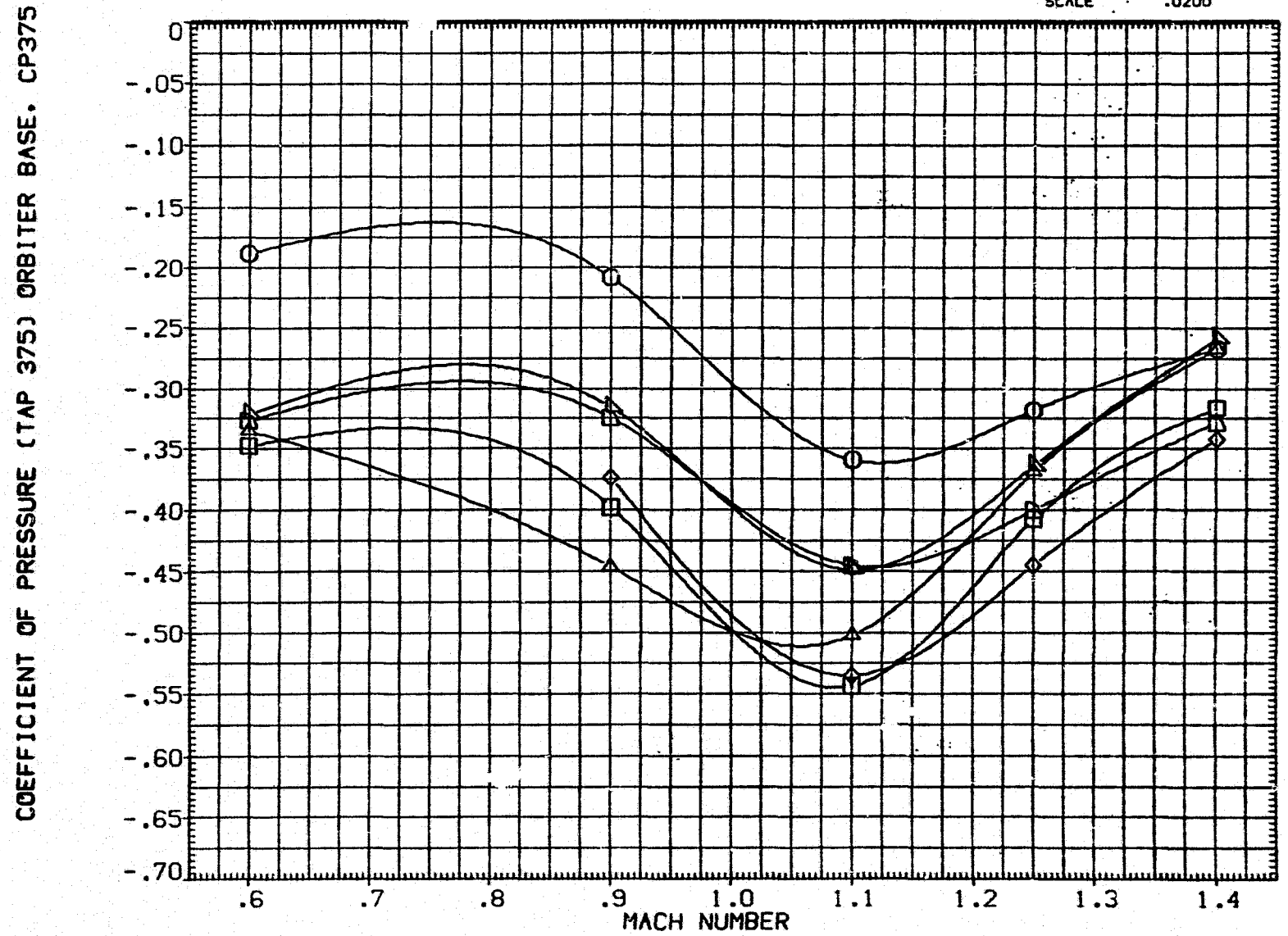



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4P28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (FE4P20) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (FE4P16) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (FE4P11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (FE4PB0) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (FE4PB5) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

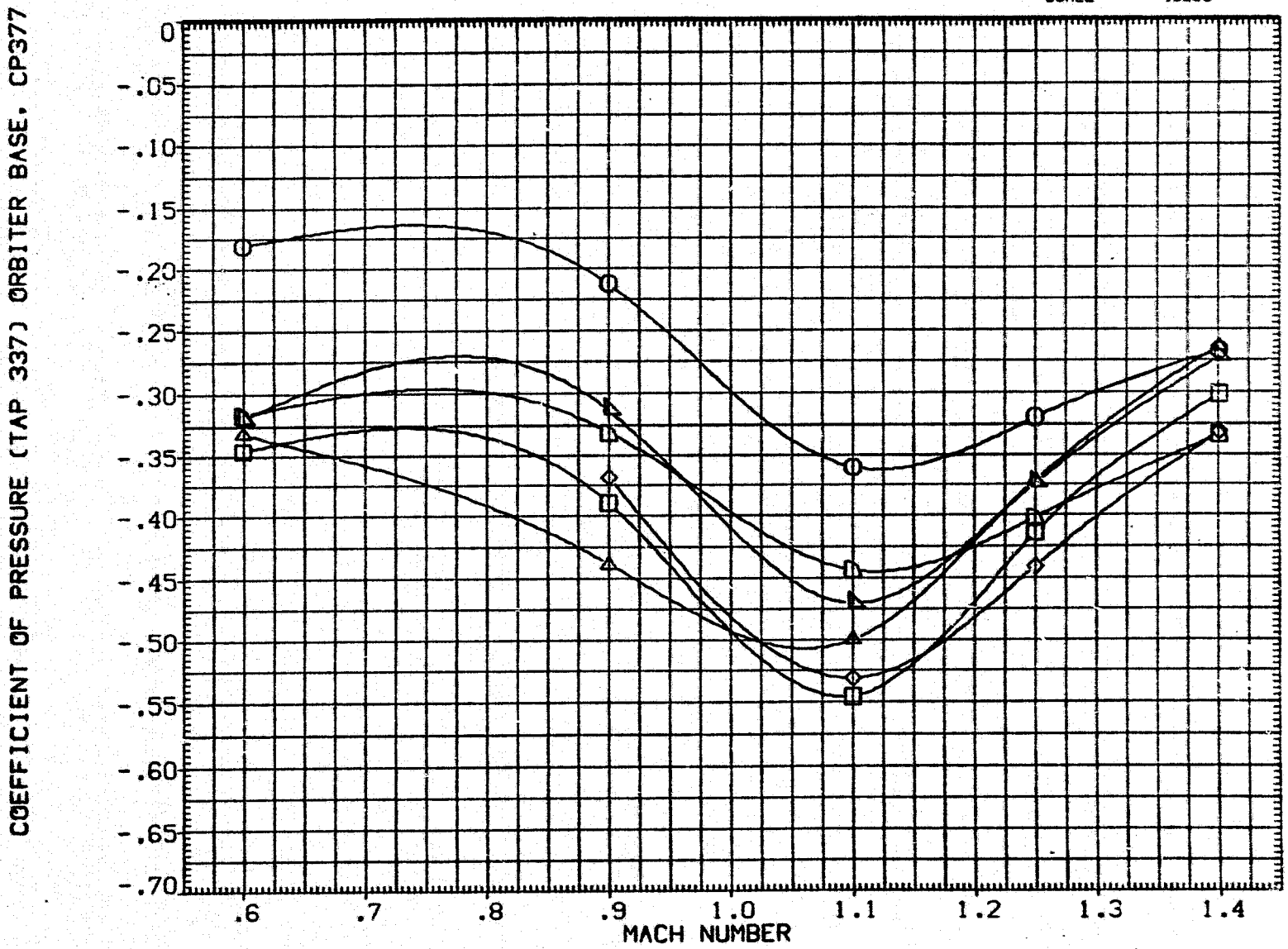



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4P28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (FE4P20) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (FE4P16) | ⊠ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (FE4P11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (FE4PB0) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (FE4PB5) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

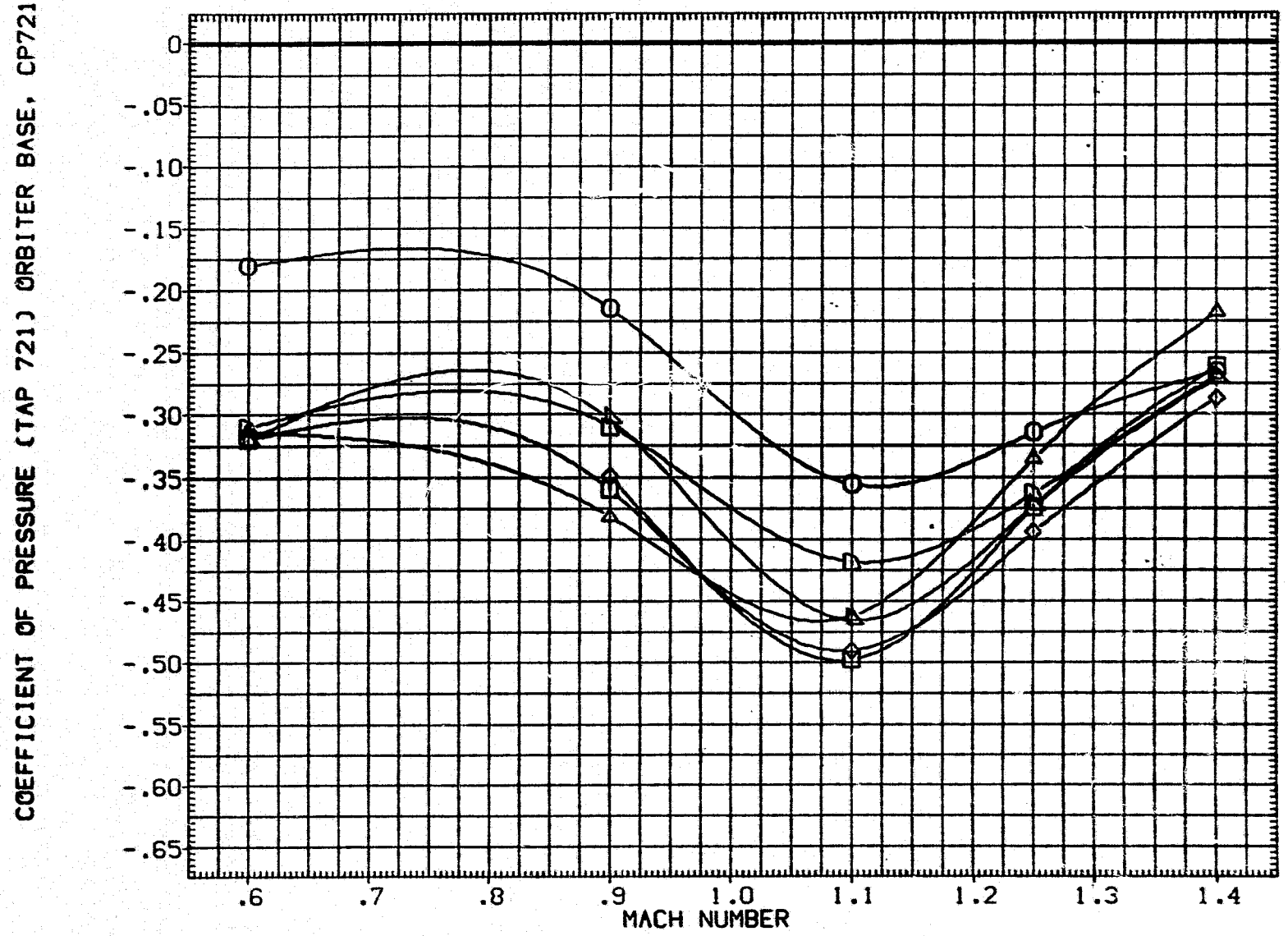



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4P28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (FE4P20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (FE4P16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (FE4P11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (FE4PB0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (FE4PB5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

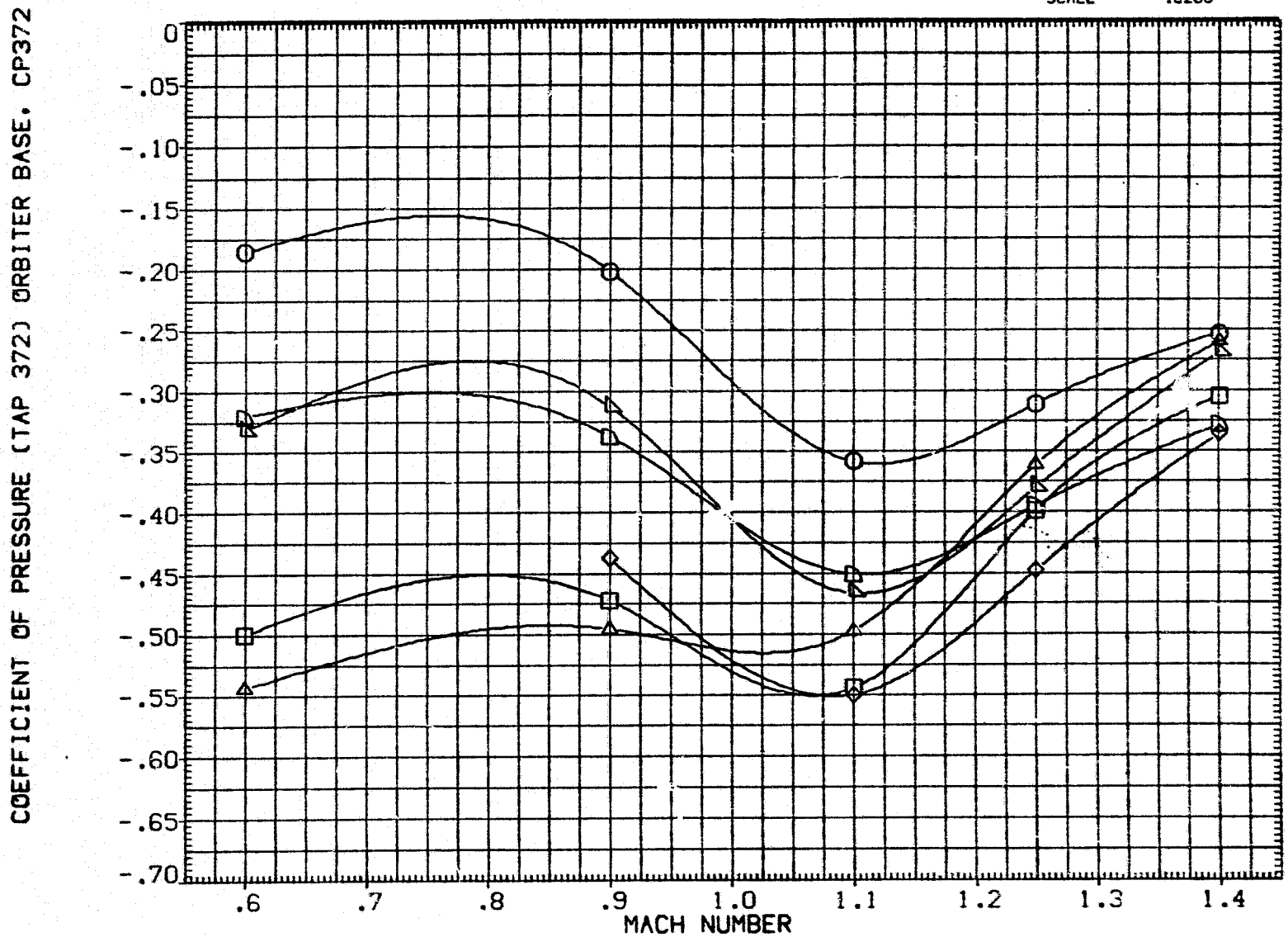



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4P28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (FE4P20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (FE4P16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (FE4P11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (FE4PB0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (FE4PB5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

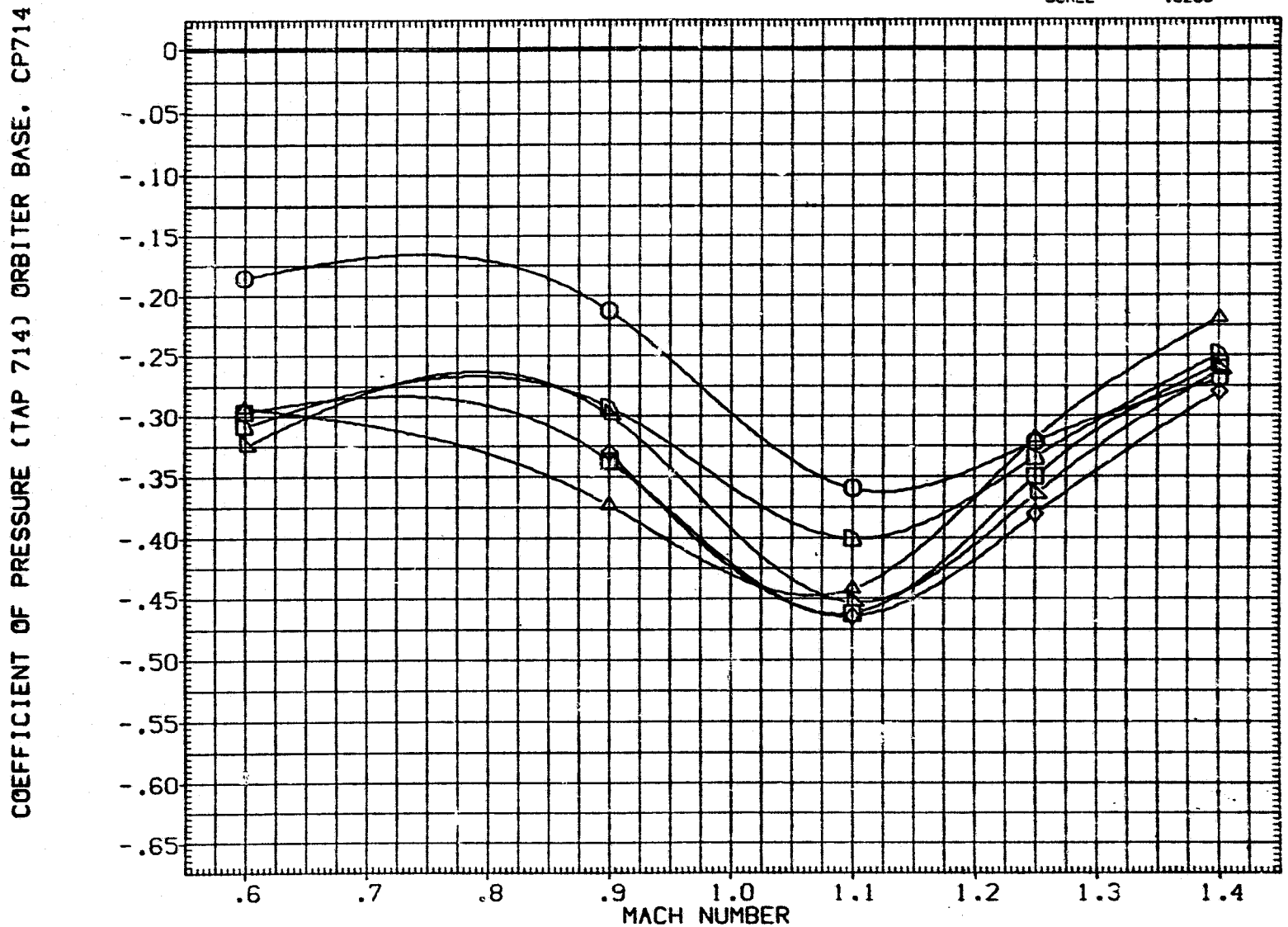



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (FE4P26) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (FE4P20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (FE4P16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (FE4P11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (FE4PB0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (FE4PB5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

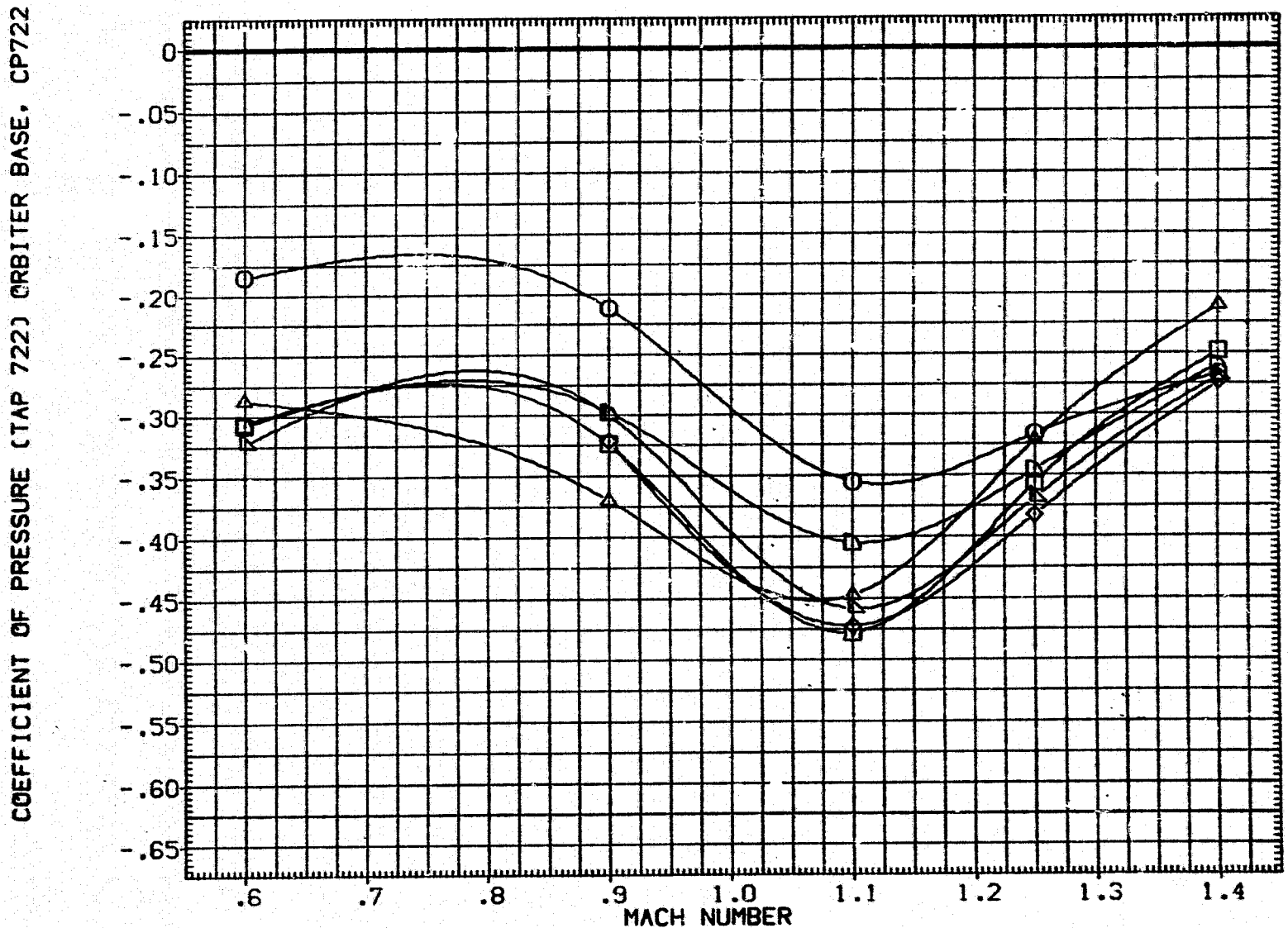



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4P28) | □ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (FE4P20) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (FE4P16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (FE4P11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (FE4PB0) | ○ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (FE4PB5) | ▷ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

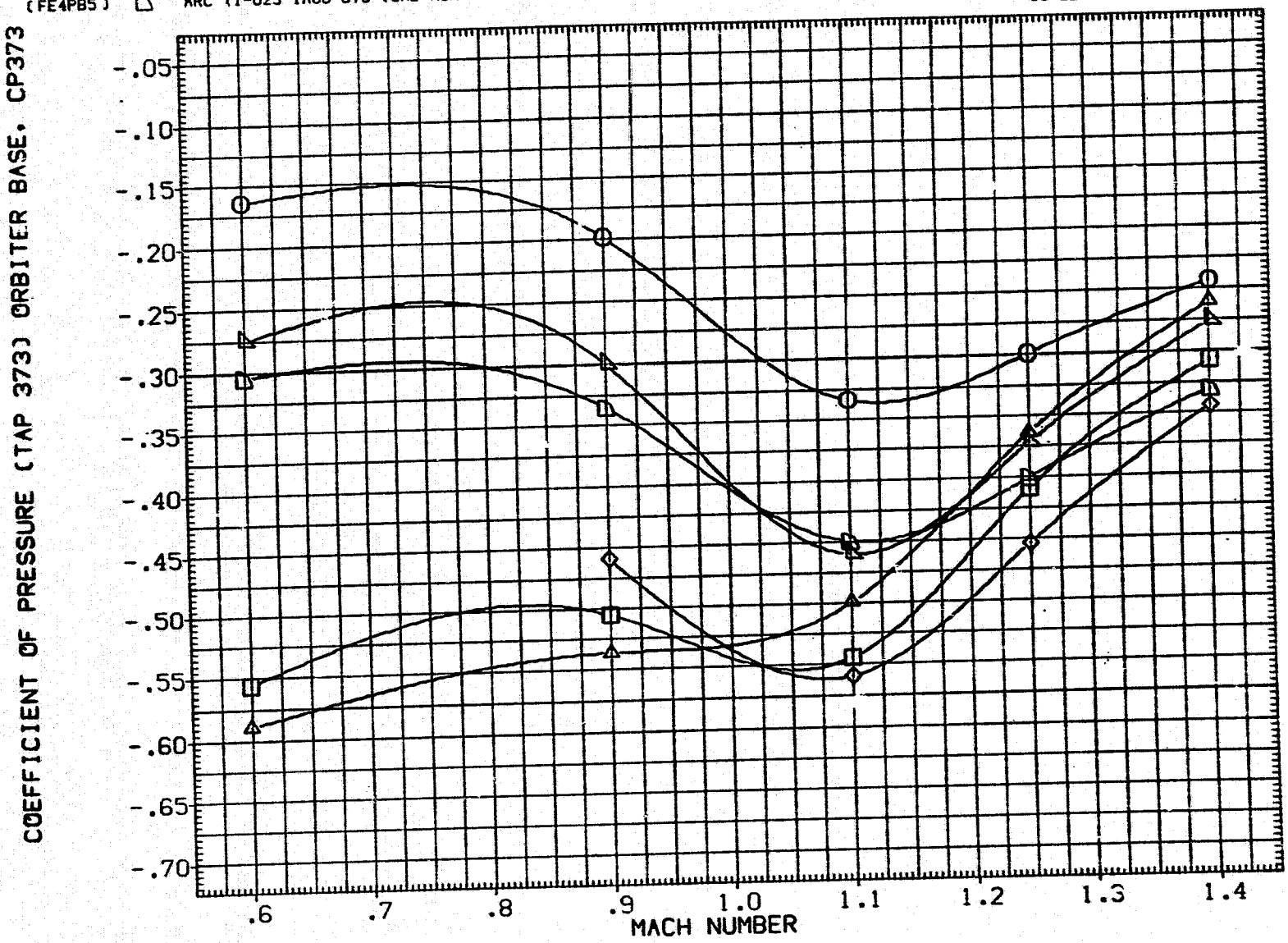



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (FE4P28) | ○ | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (FE4P20) | □ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (FE4P16) | ◇ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (FE4P11) | △ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (FE4PB0) | ▽ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (FE4PB5) | ◁ | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

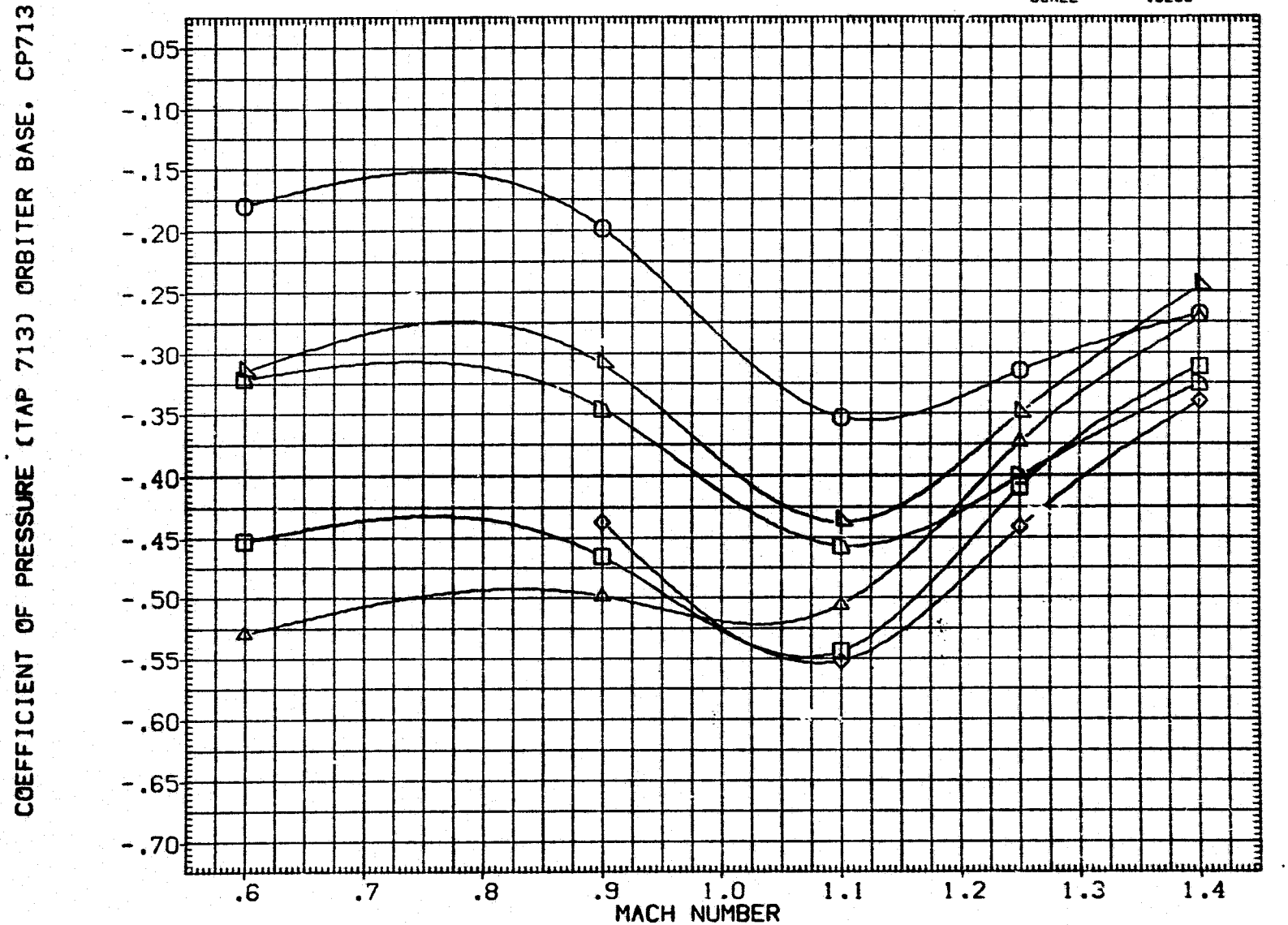



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4P28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (GE4P20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (GE4P16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (GE4P11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (GE4P80) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (GE4P85) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

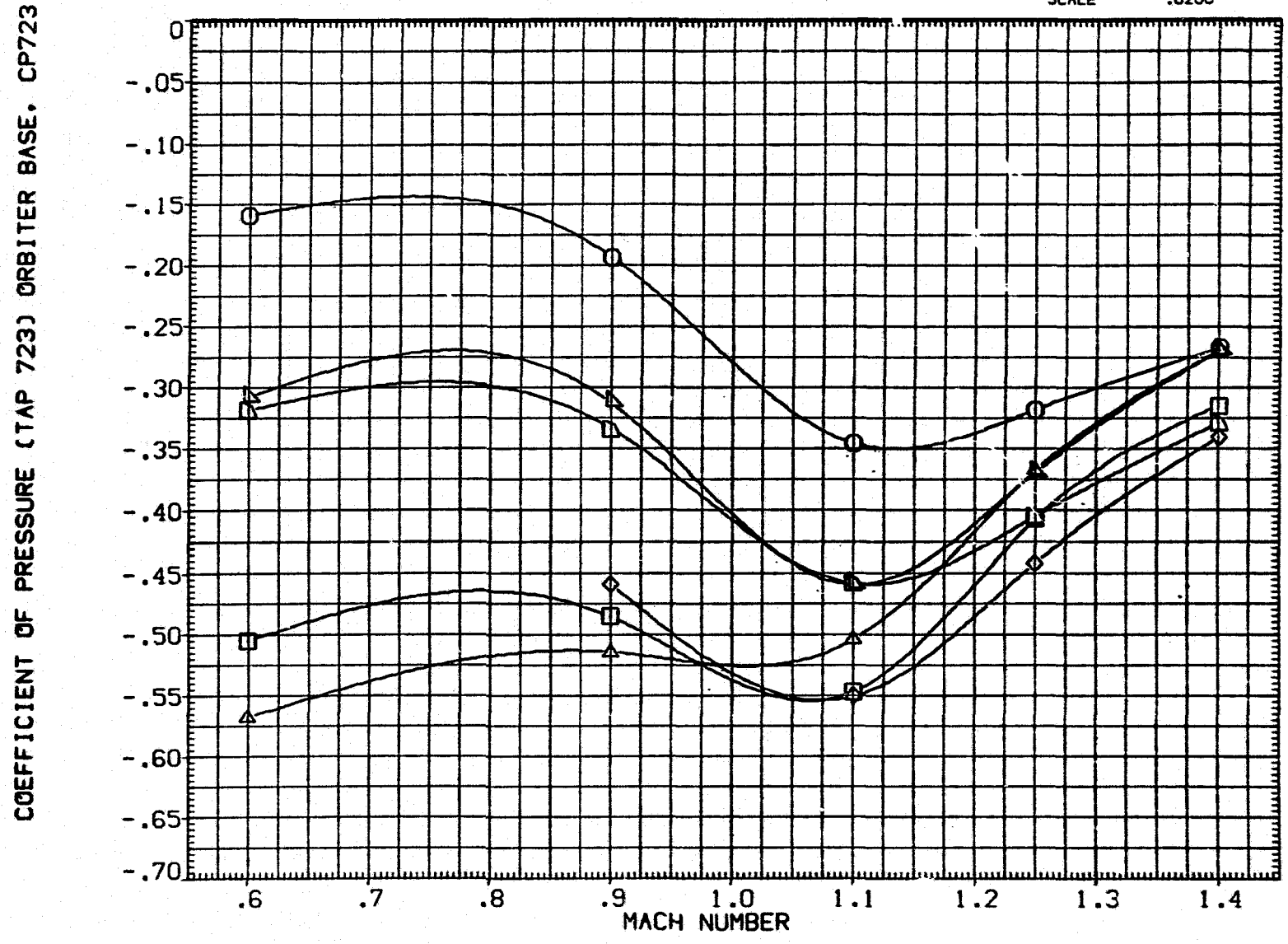



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (GE4P28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (GE4P20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (GE4P16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (GE4P11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (GE4P80) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (GE4P85) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

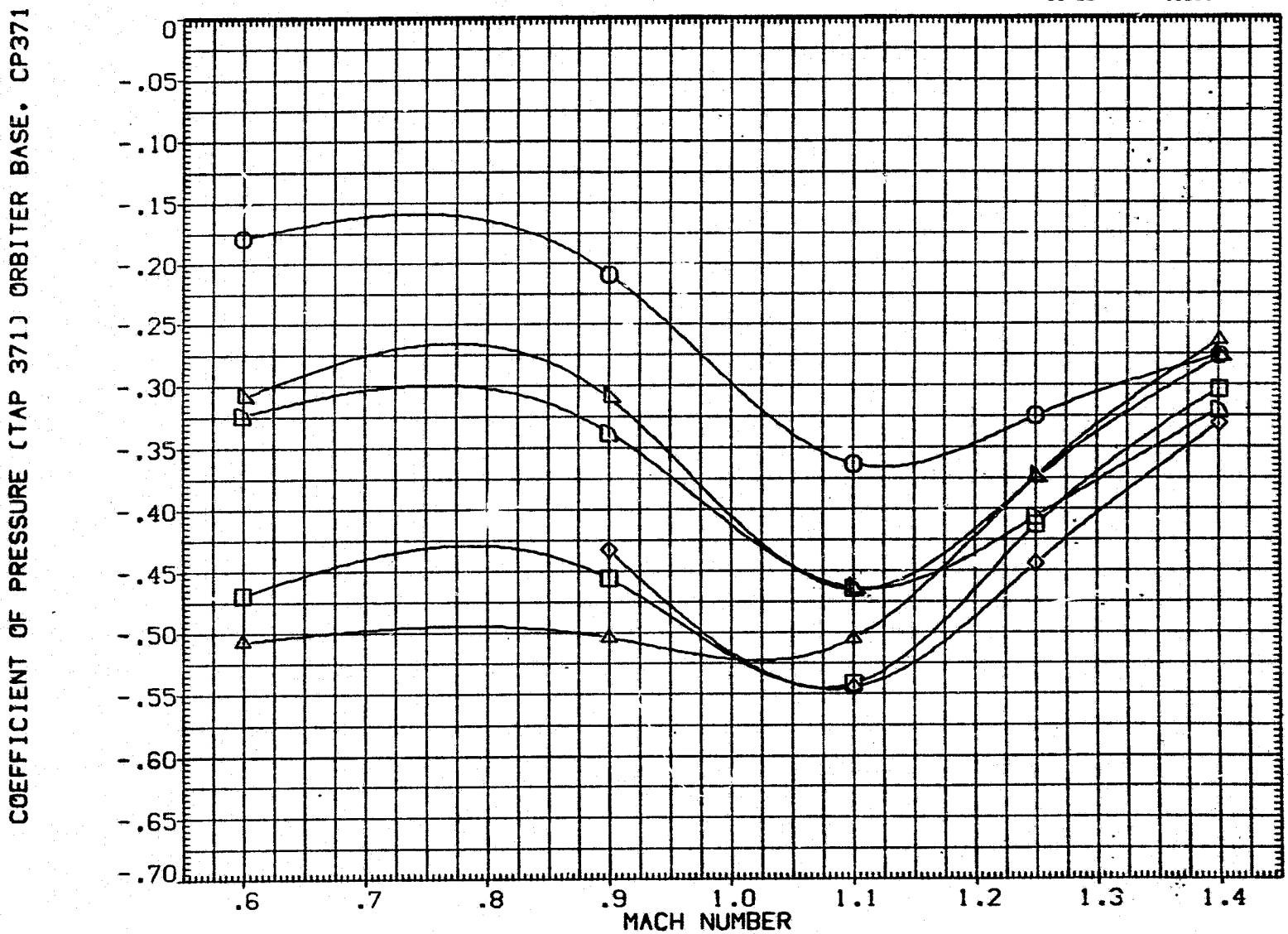



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|
| (GE4P28) | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (GE4P20) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (GE4P16) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (GE4P11) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (GE4PB0) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (GE4PB5) | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

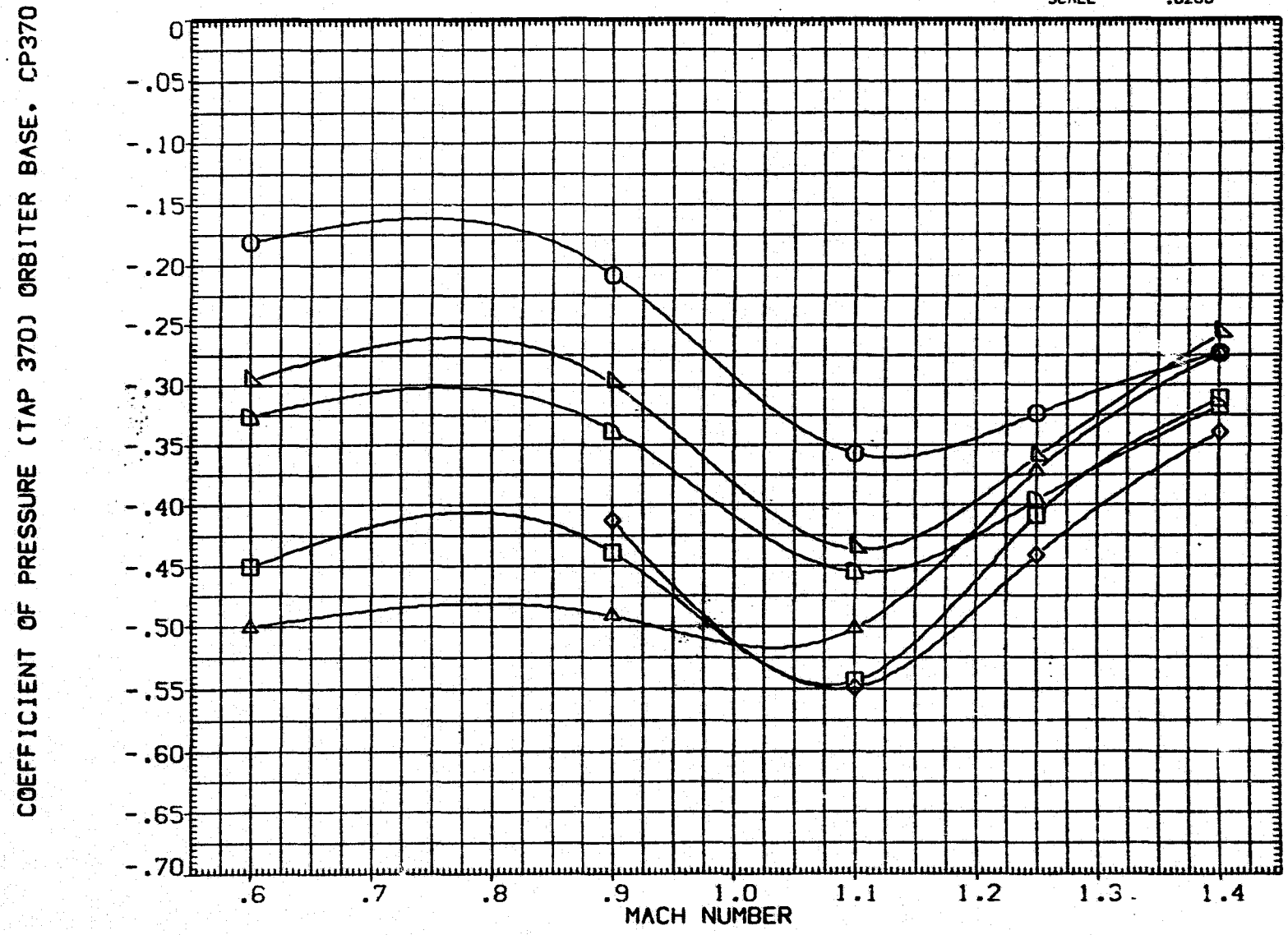



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | ALPHA |
|---|---|---|---|---|---|
| (GE4P28) | | ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF ) | .000 | .000 | 4.000 |
| (GE4P20) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM ) | .000 | .000 | 4.000 |
| (GE4P16) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM- ) | .000 | .000 | 4.000 |
| (GE4P11) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM+ ) | .000 | .000 | 4.000 |
| (GE4P80) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 2 OUT) | .000 | .000 | 4.000 |
| (GE4P85) | | ARC 11-023 IA80 OTS (SRB NOM ) (SSME NO. 1 OUT) | .000 | .000 | 4.000 |

| REFERENCE INFORMATION | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

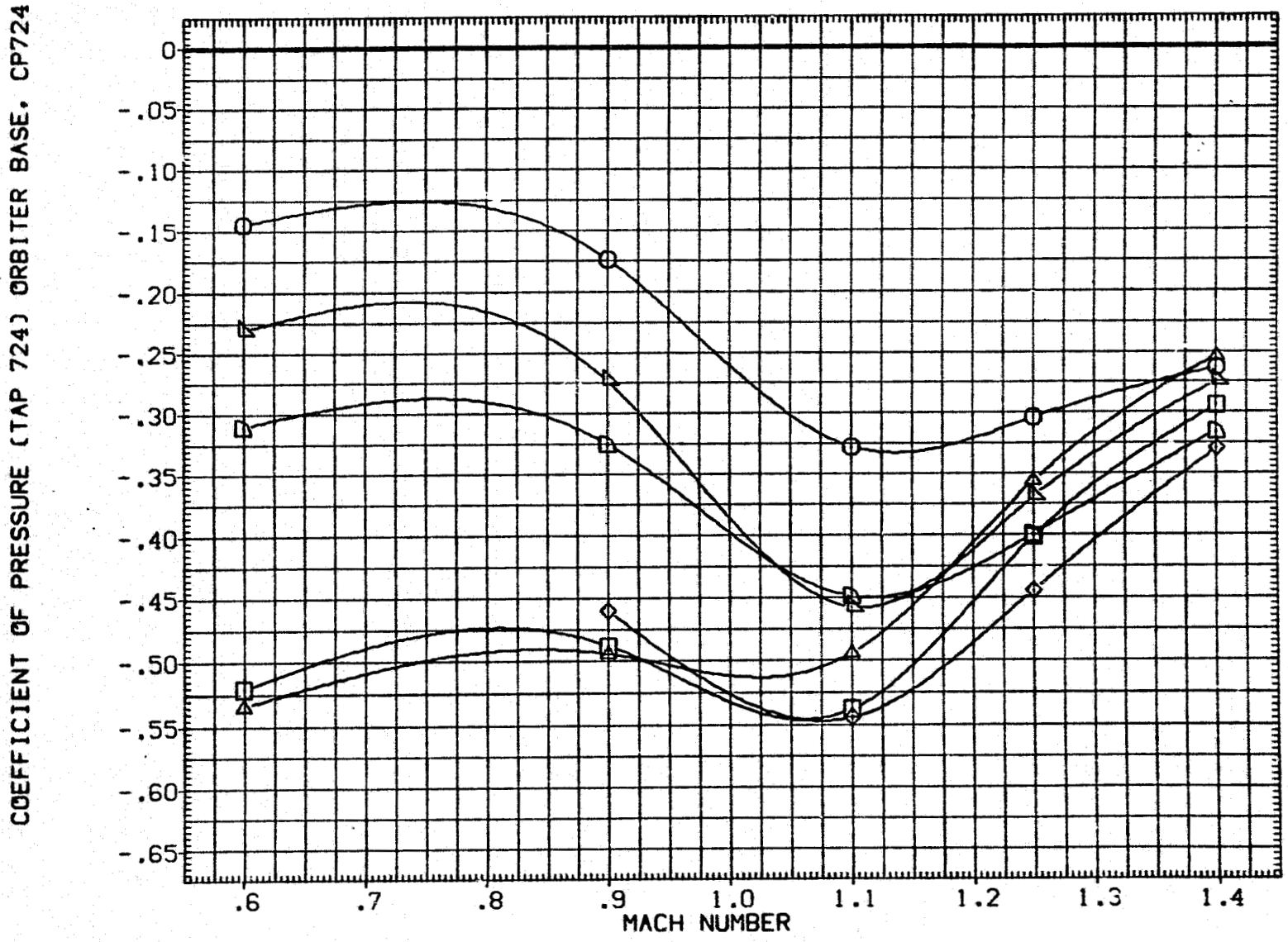



FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A)BETA = .00

(BE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | | PARAMETRIC VALUES | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | BE4Z28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | BE4Z30 | 1.100 |
| ◇ | 4.000 | | | | | BE4Z32 | 1.400 |

| DATASET | MACH |
|---|---|
| BE4Z29 | .900 |
| BE4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

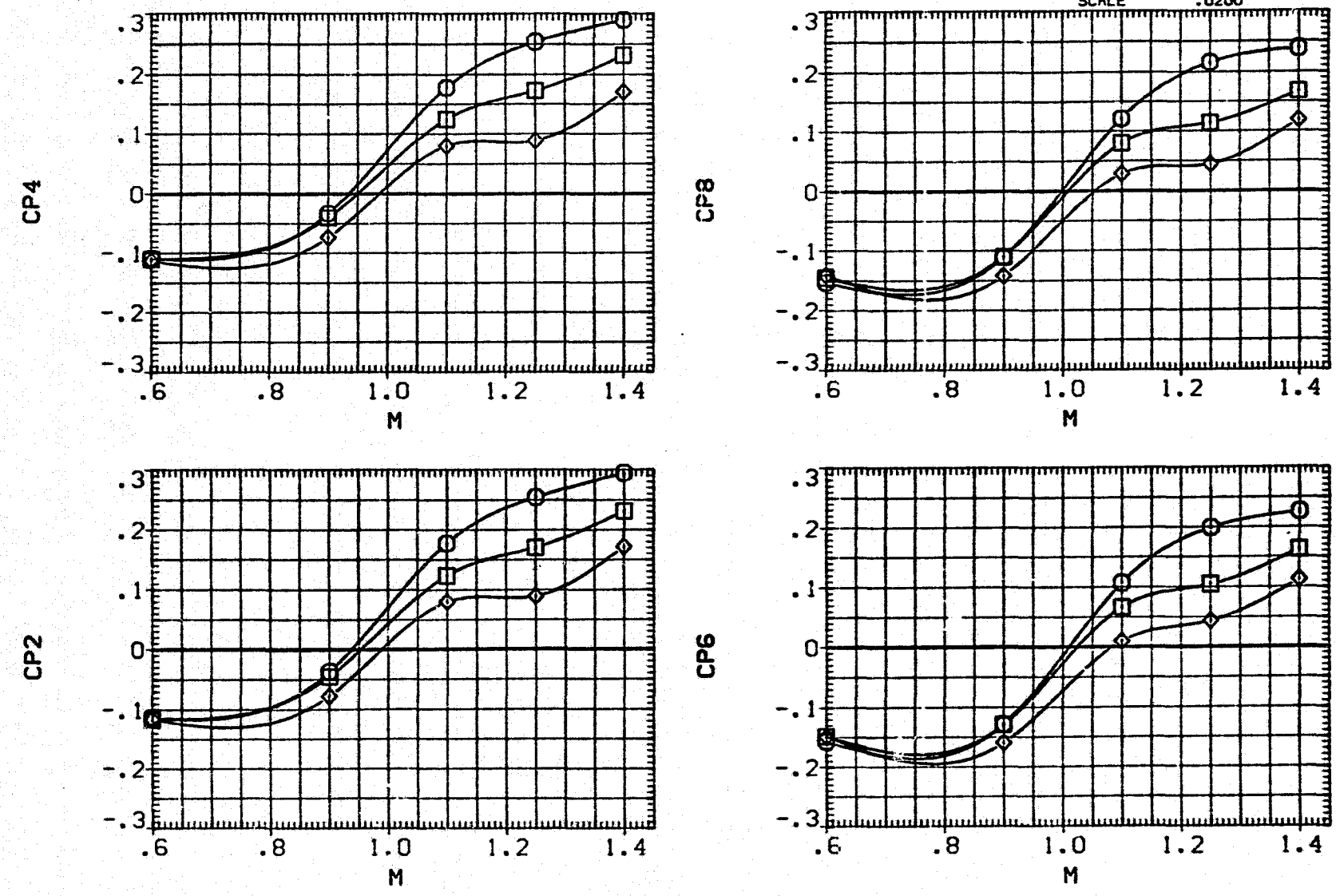



FIG. 127 ORB VENT PRESSURES

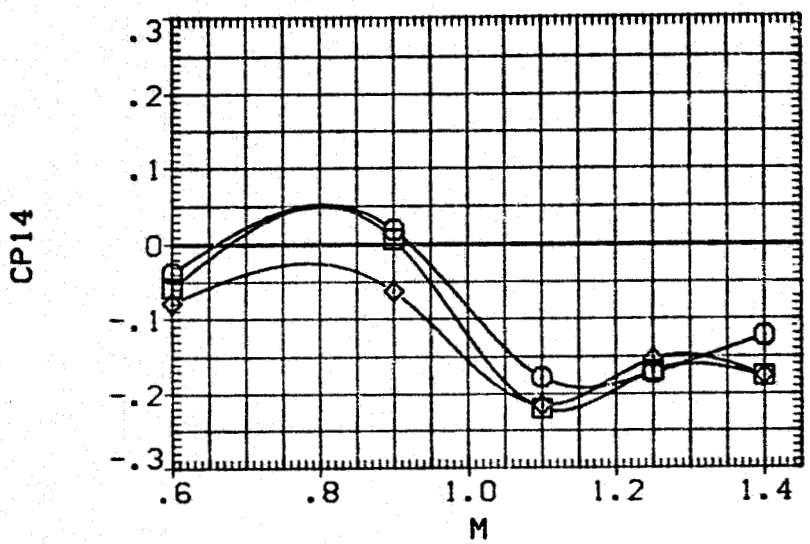
(BE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

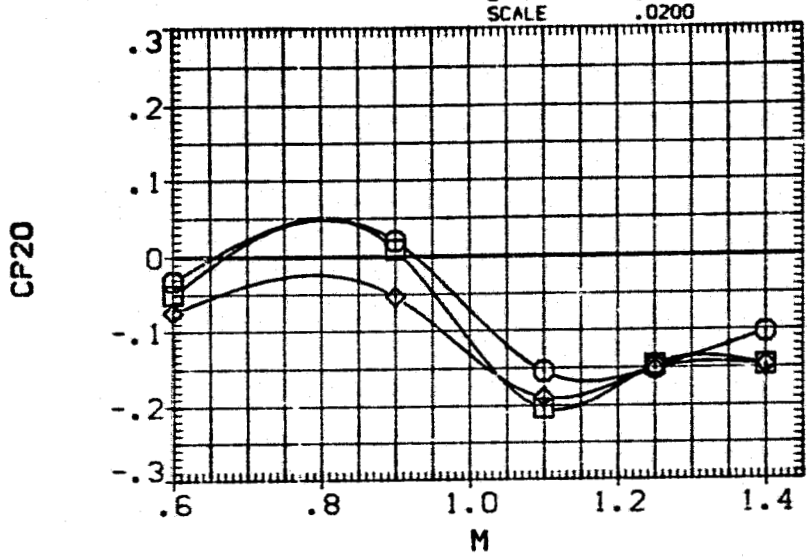
| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ◇□○ | -4.000 | BETA | .000 | ELV-IB | .000 | BE4Z28 | .600 |
| | .000 | ELV-OB | .000 | RN/L | 3.400 | BE4Z30 | 1.100 |
| | 4.000 | | | | | BE4Z32 | 1.400 |

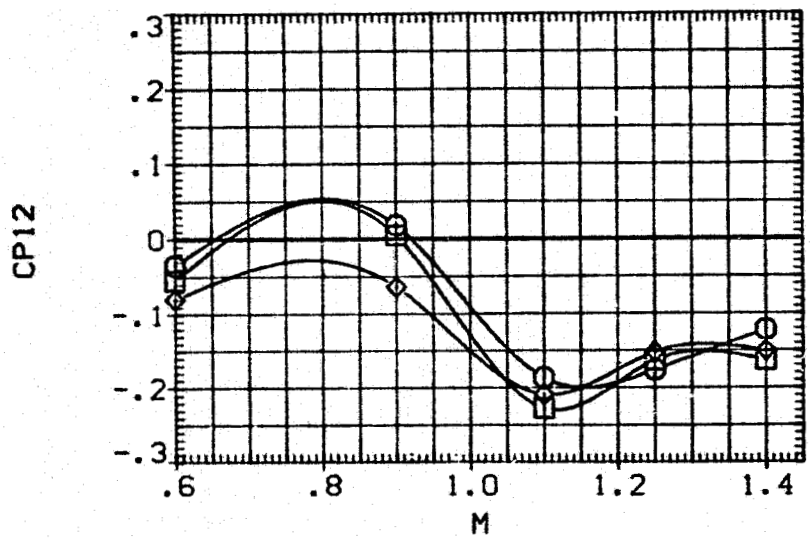
| DATASET | MACH |
|---|---|
| BE4Z29 | .900 |
| BE4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



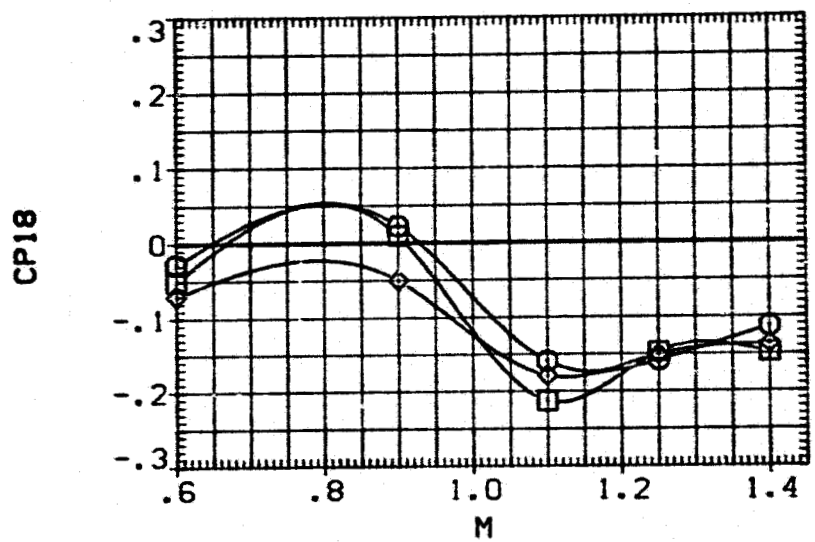




FIG. 127 ORB VENT PRESSURES

(BE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | BE4Y28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | BE4Y30 | 1.100 |
| ◇ | 4.000 | | | | | BE4Y32 | 1.400 |

| DATASET | MACH |
|---|---|
| BE4Y29 | .900 |
| BE4Y31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

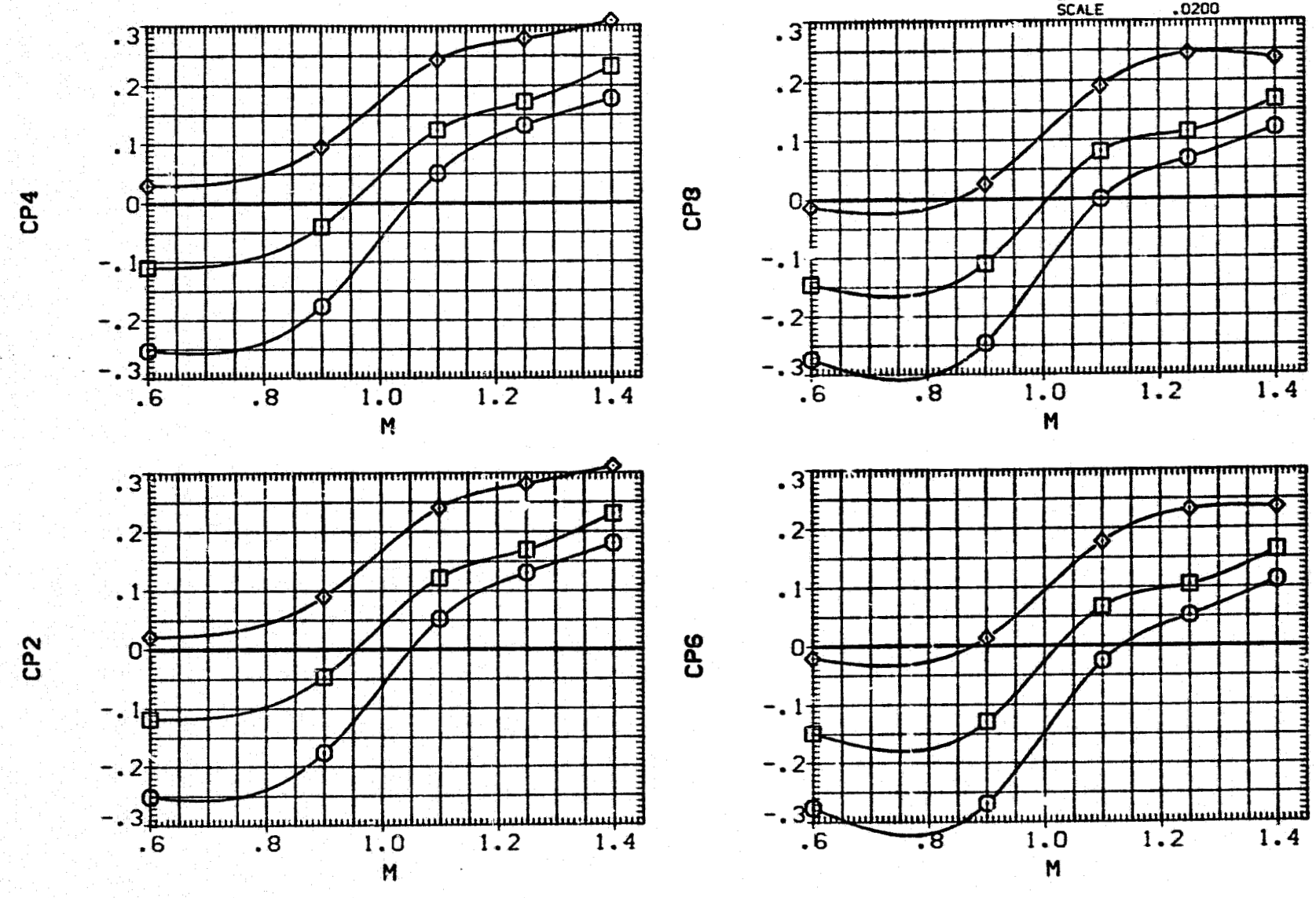



FIG. 127 ORB VENT PRESSURES

(BE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ◇ | -4.000 | ALPHA | .000 | ELV-IB | .000 | BE4Y28 | .600 | BE4Y29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | BE4Y30 | 1.100 | BE4Y31 | 1.250 |
| ○ | 4.000 | | | | | BE4Y32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

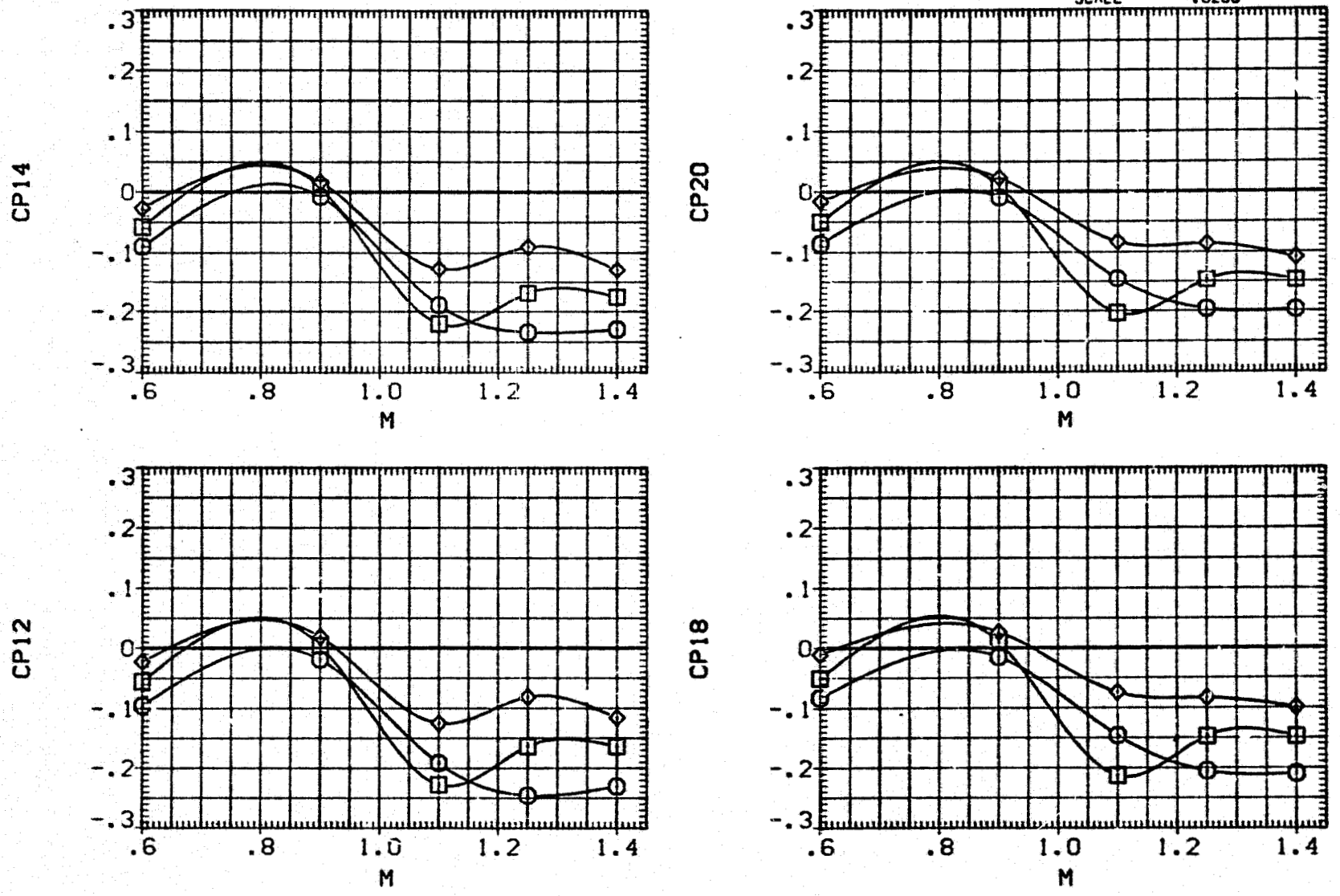


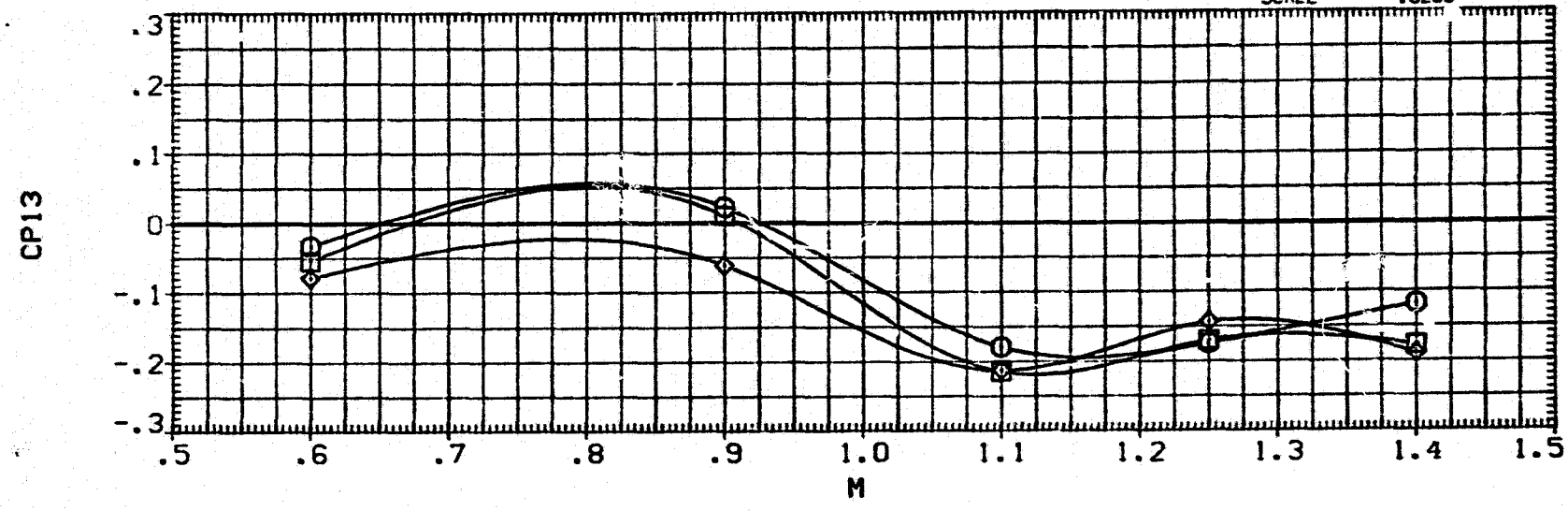

FIG. 127 ORB VENT PRESSURES

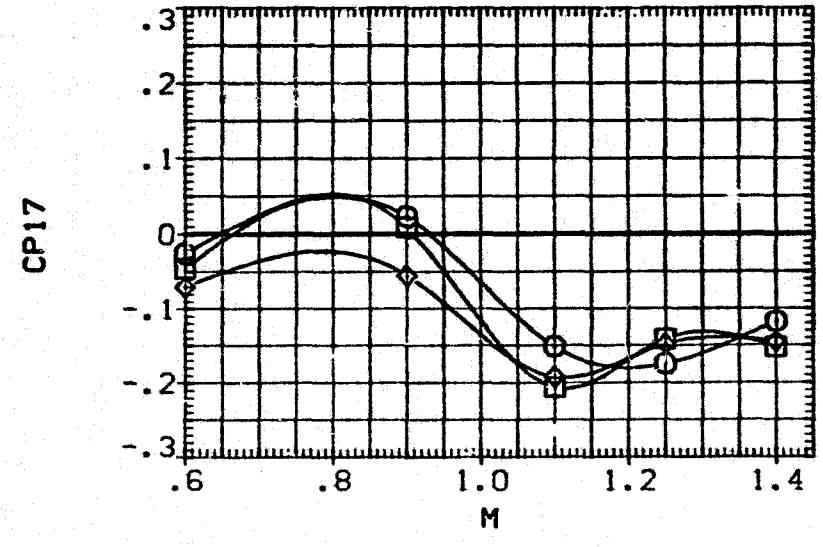
(IE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | IE4Z28 | .600 | IE4Z29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | IE4Z30 | 1.100 | IE4Z31 | 1.250 |
| ◇ | 4.000 | | | | | IE4Z32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



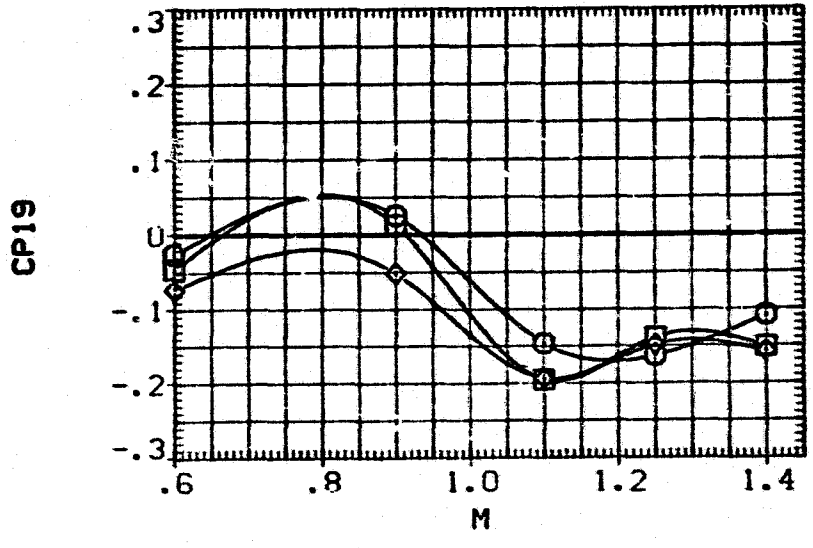



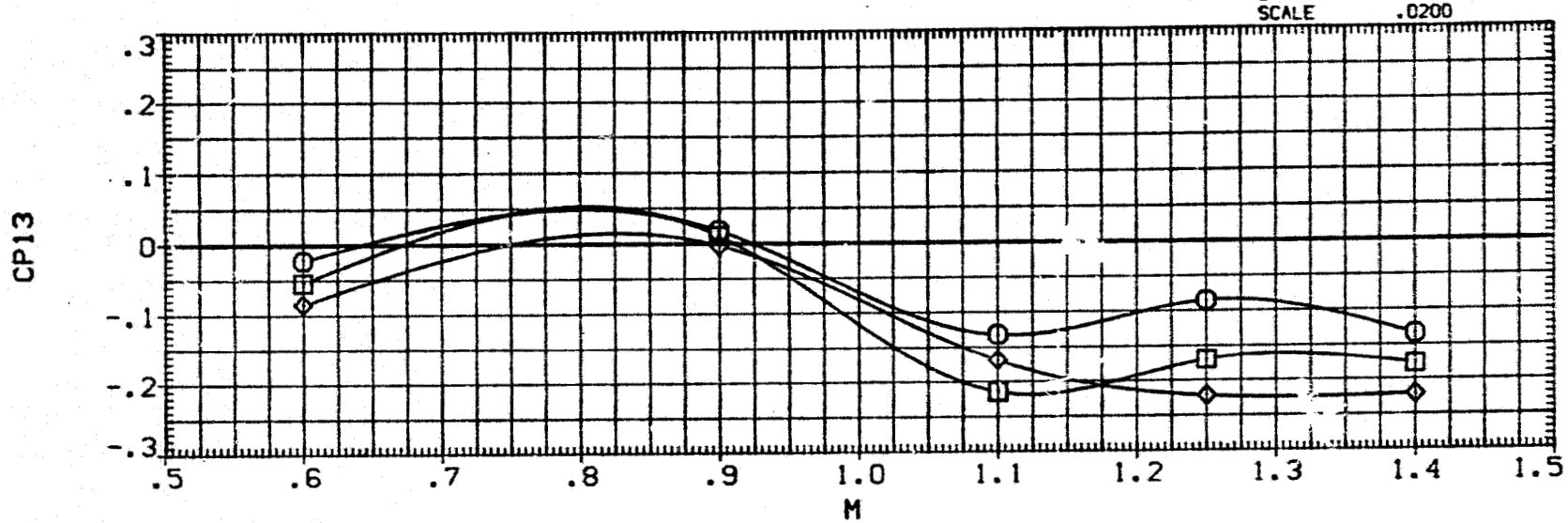

FIG. 127 ORB VENT PRESSURES

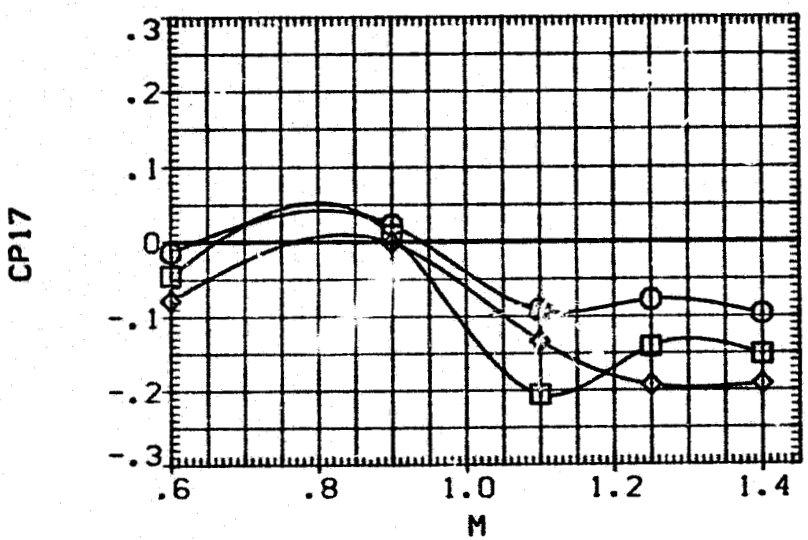
(IE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○□ | -4.000 | ALPHA | .000 | ELV-IB | .000 | IE4Y28 | .500 | IE4Y29 | .900 |
| | .000 | ELV-OB | .000 | RN/L | 3.400 | IE4Y30 | 1.100 | IE4Y31 | 1.250 |
| ◇ | 4.000 | | | | | IE4Y32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



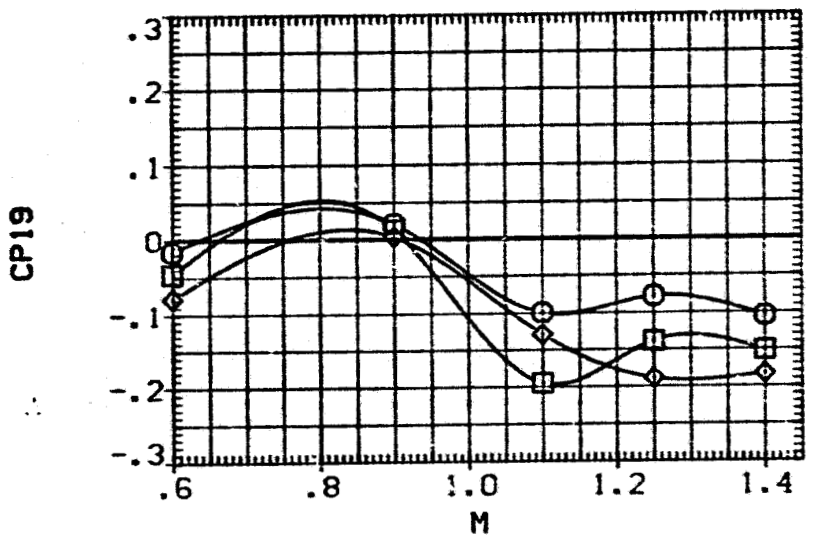



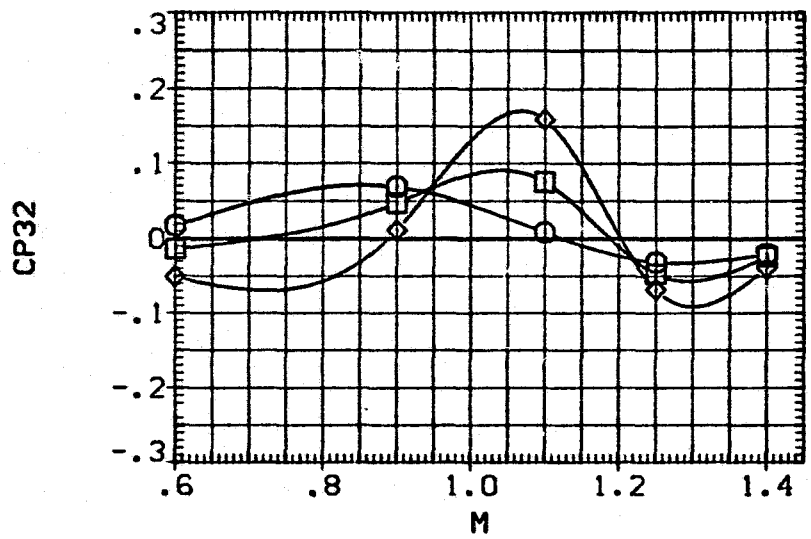

FIG. 127 ORB VENT PRESSURES

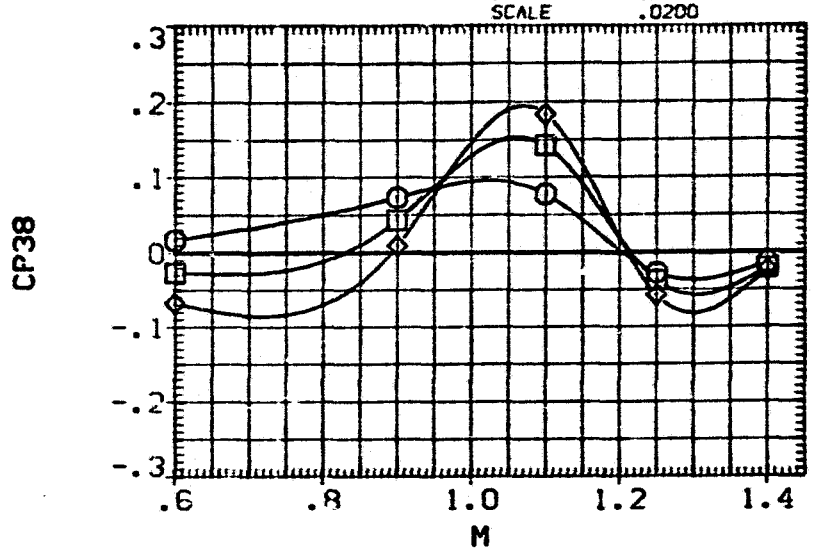
(CE4Z28) ARC 11-023 IA80 0TS (SRB 0FF ) (SSME 0FF )

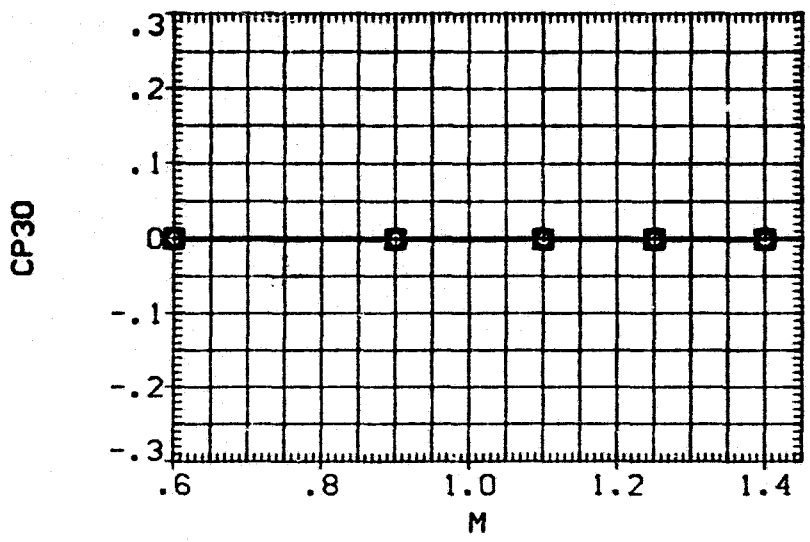
| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | CE4Z28 | .600 | CE4Z29 | .900 |
| □ | .000 | ELV-0B | .000 | RN/L | 3.400 | CE4Z30 | 1.100 | CE4Z31 | 1.250 |
| ◇ | 4.000 | | | | | CE4Z32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



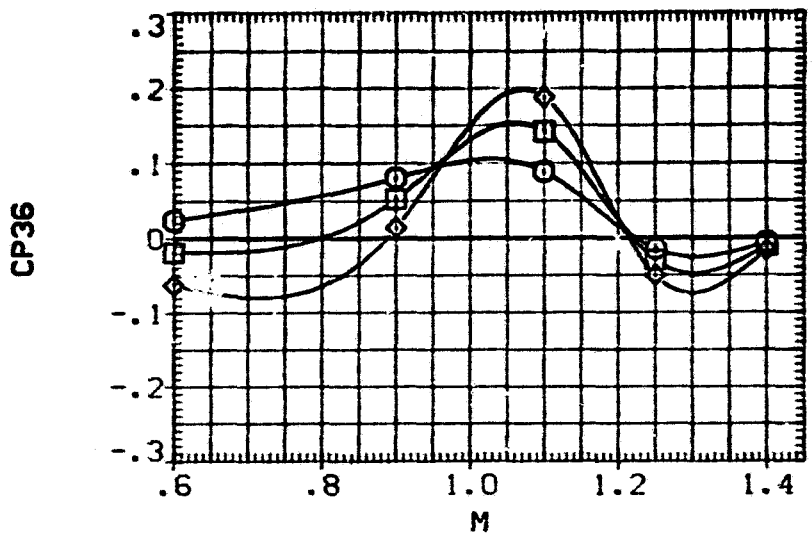




FIG. 127 ORB VENT PRESSURES

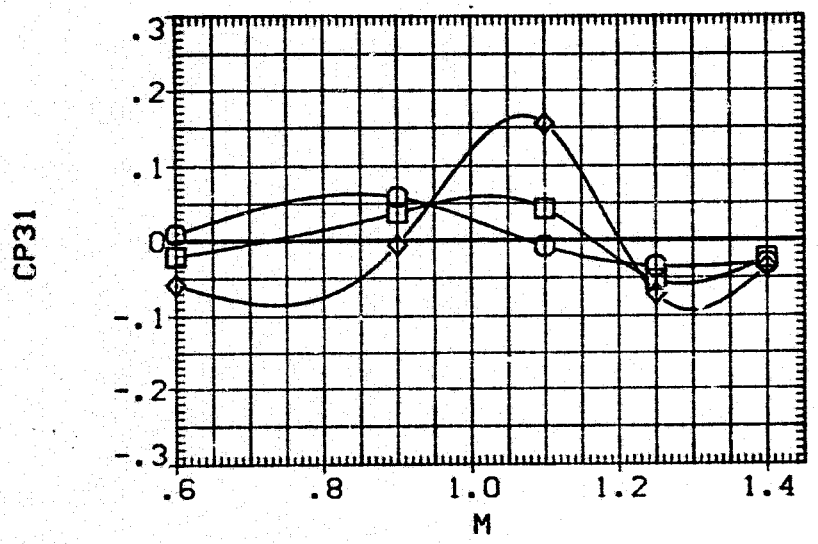
(CE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

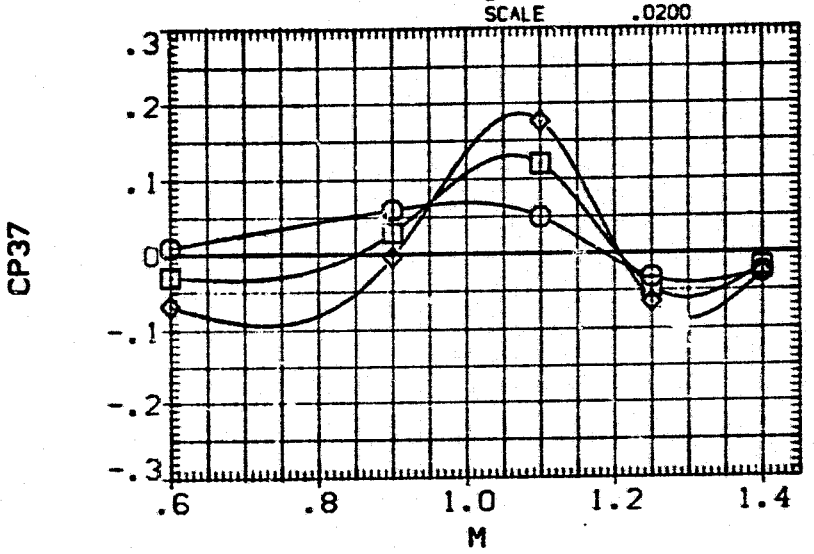
| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | CE4Z28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | CE4Z30 | 1.100 |
| ◇ | 4.000 | | | | | CE4Z32 | 1.400 |

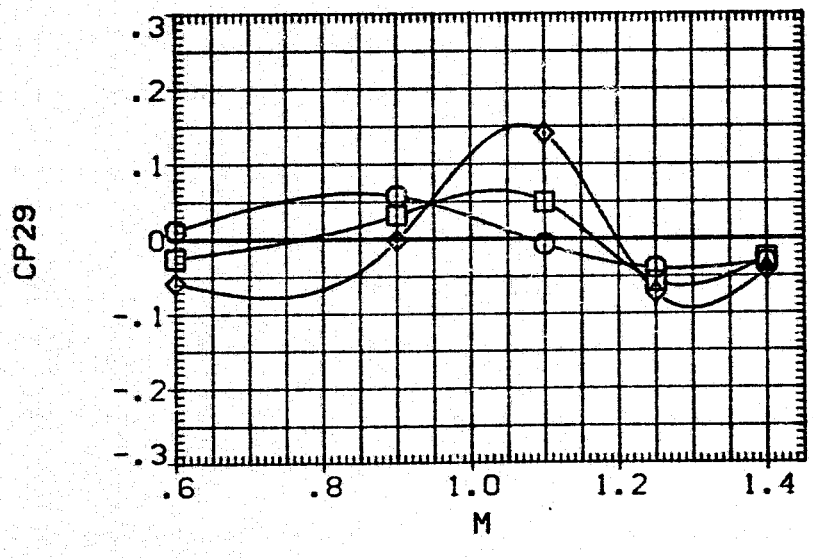
| DATASET | MACH |
|---|---|
| CE4Z29 | .900 |
| CE4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



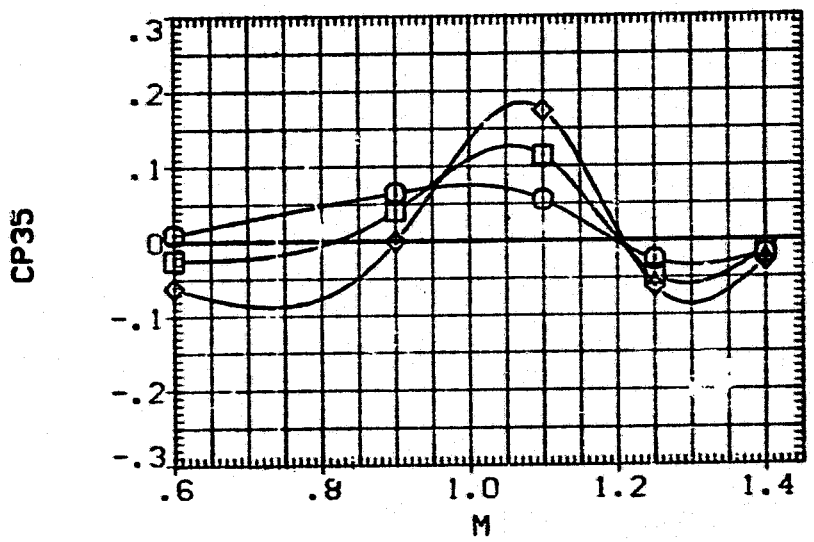




FIG. 127 ORB VENT PRESSURES

(CE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | CE4Y28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | CE4Y30 | 1.100 |
| ◇ | 4.000 | | | | | CE4Y32 | 1.400 |

| DATASET | MACH |
|---|---|
| CE4Y29 | .900 |
| CE4Y31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

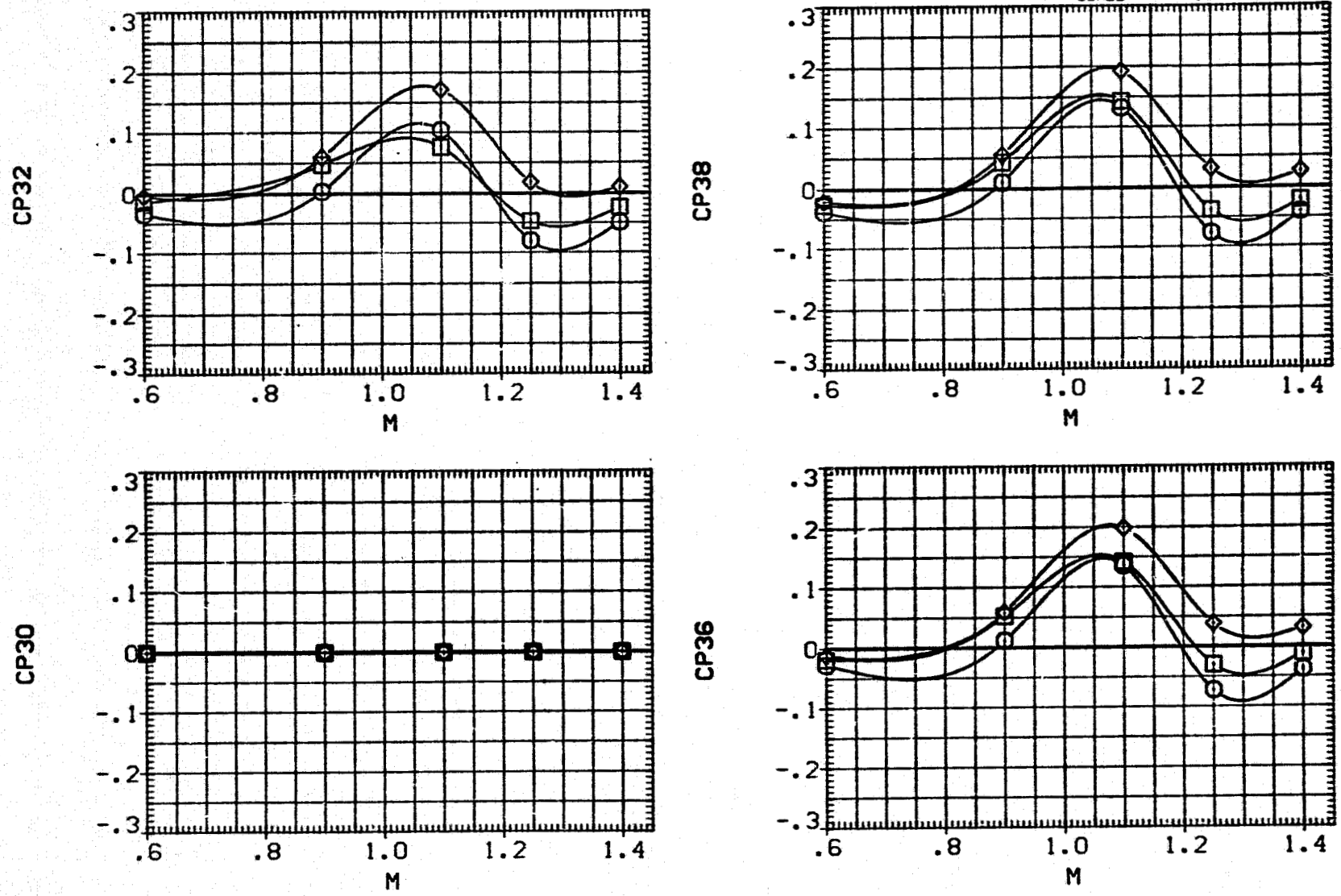



FIG. 127 ORB VENT PRESSURES

(CE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | CE4Y28 | .600 | CE4Y29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | CE4Y30 | 1.100 | CE4Y31 | 1.250 |
| ◇ | 4.000 | | | | | CE4Y32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

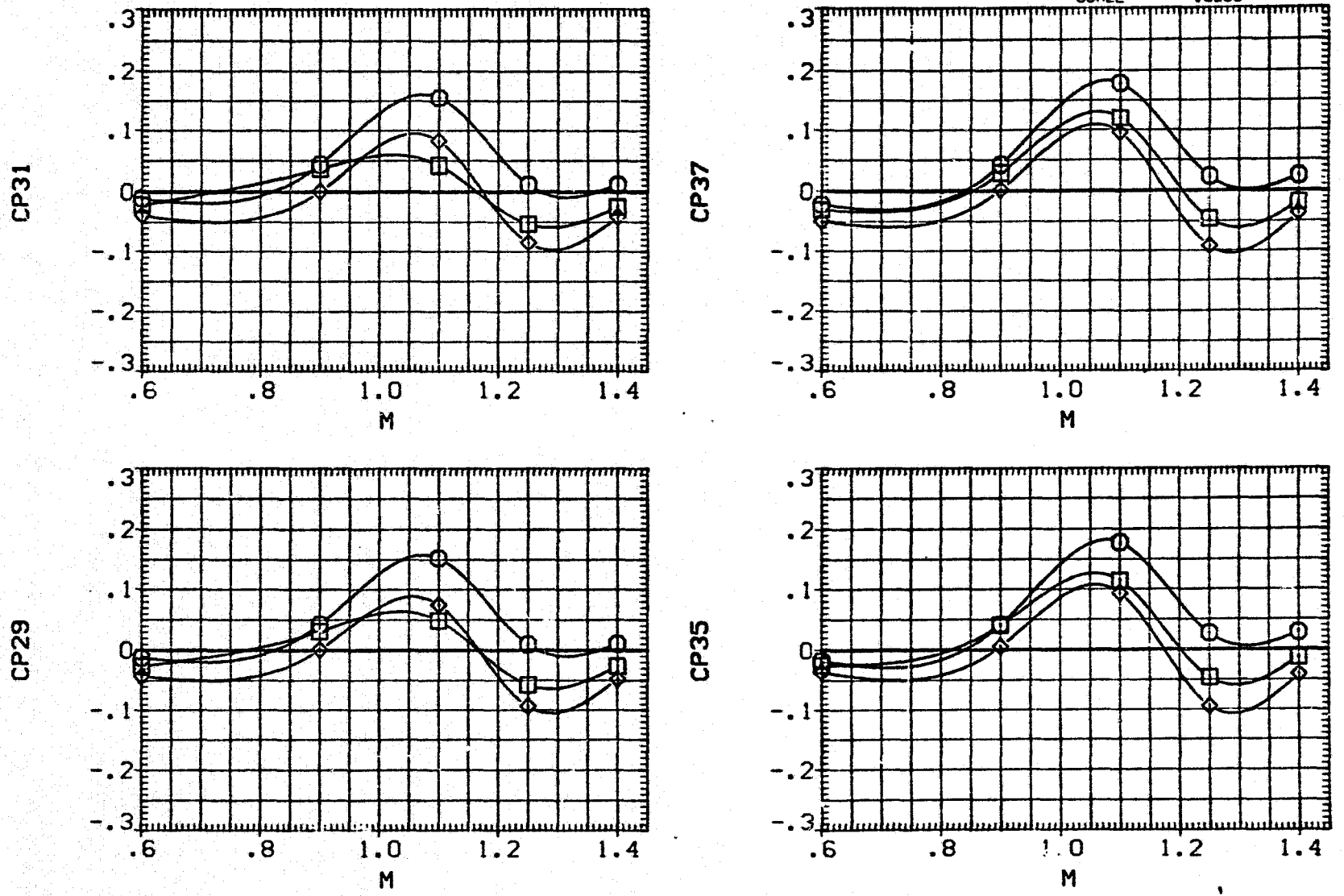



FIG. 127 ORB VENT PRESSURES

(HE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | HE4Z28 | .600 | HE4Z29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | HE4Z30 | 1.100 | HE4Z31 | 1.250 |
| ◇ | 4.000 | | | | | HE4Z32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

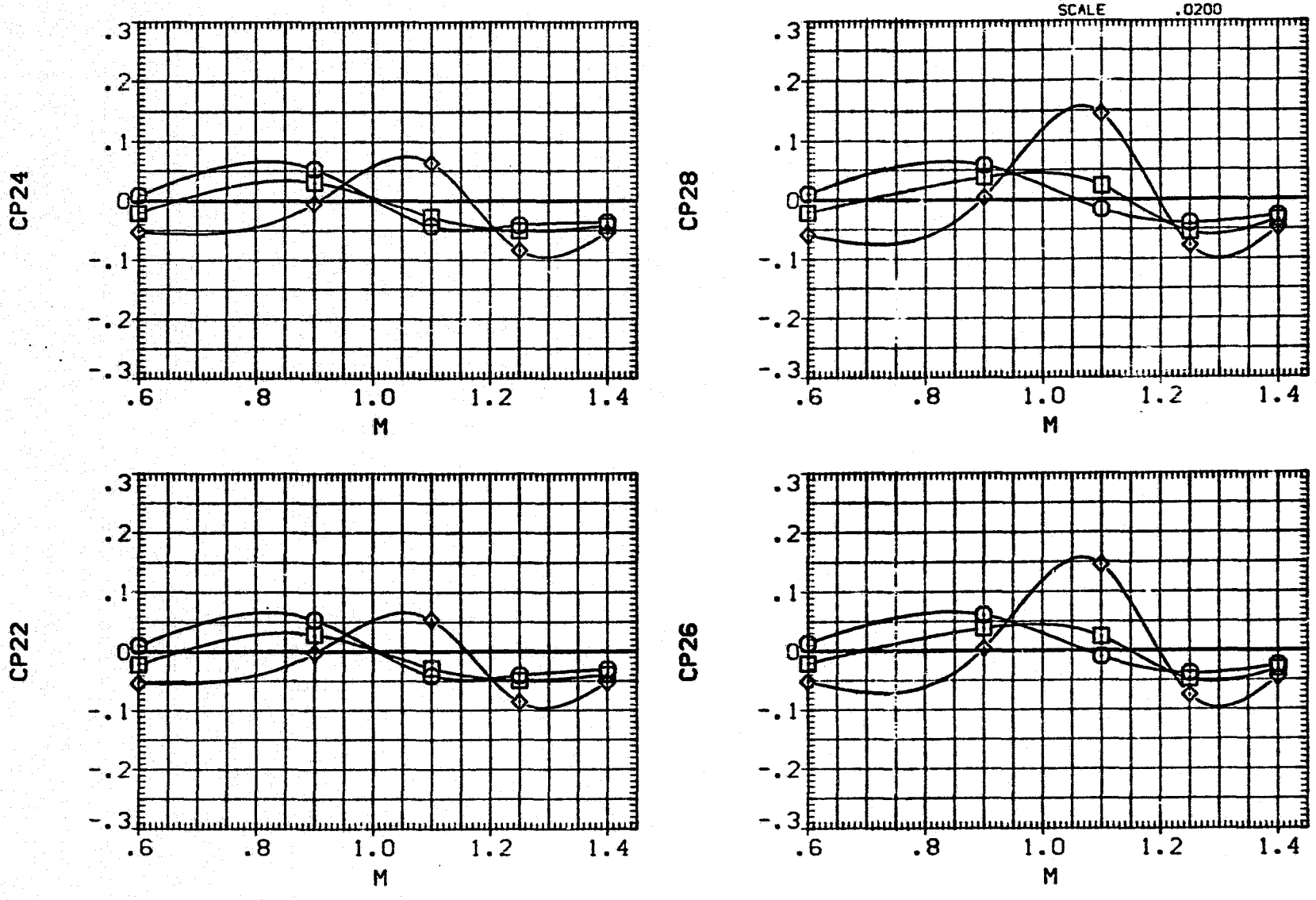



FIG. 127 ORB VENT PRESSURES

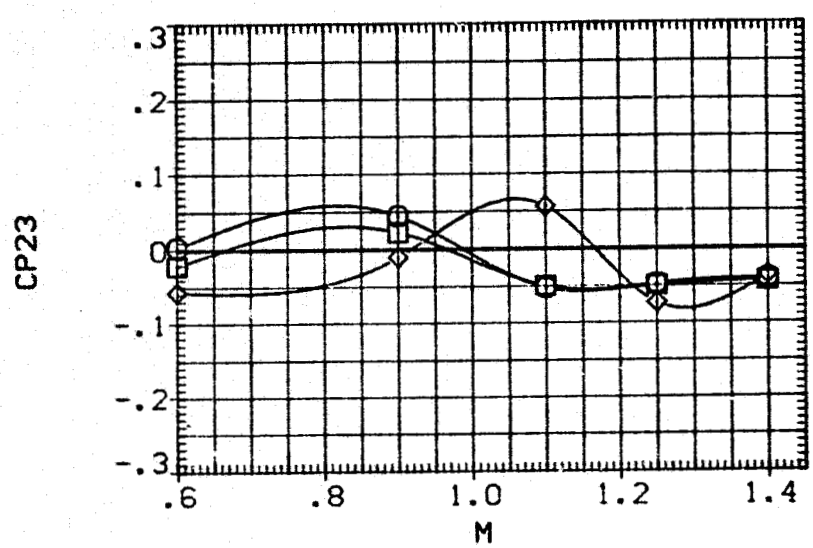
(HE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

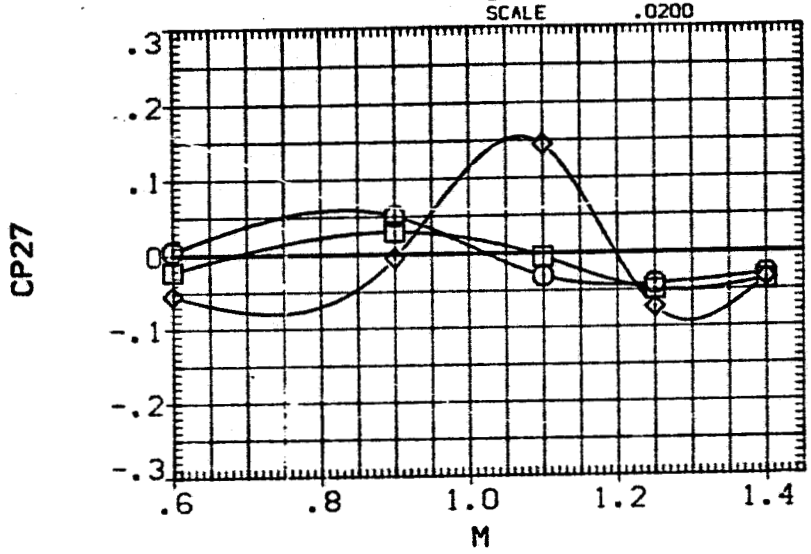
| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ◇□○ | -4.000 | BETA | .000 | ELV-IB | .000 | HE4Z28 | .600 |
| | .000 | ELV-OB | .000 | RN/L | 3.400 | HE4Z30 | 1.100 |
| | 4.000 | | | | | HE4Z32 | 1.400 |

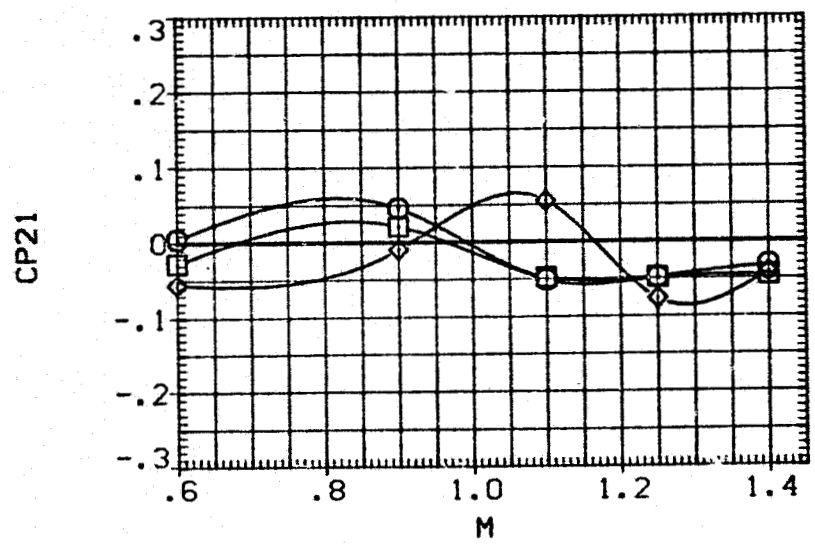
| DATASET | MACH |
|---|---|
| HE4Z29 | .900 |
| HE4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



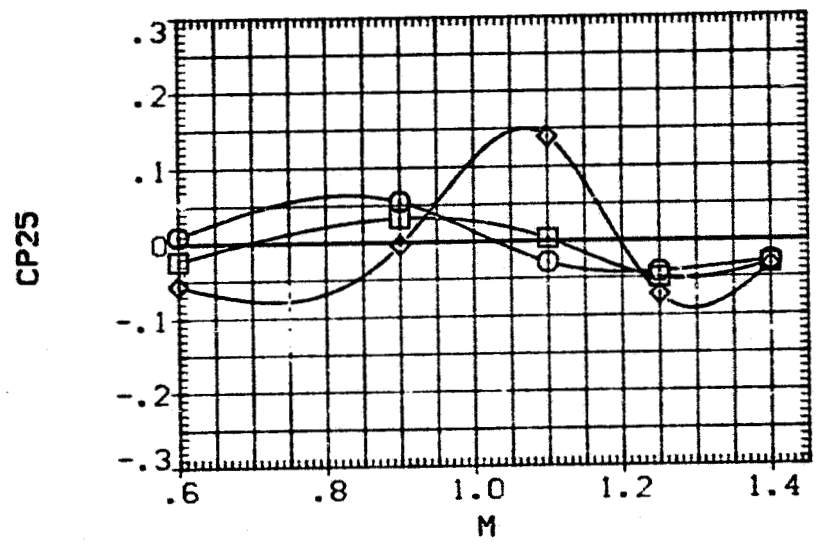




FIG. 127 ORB VENT PRESSURES

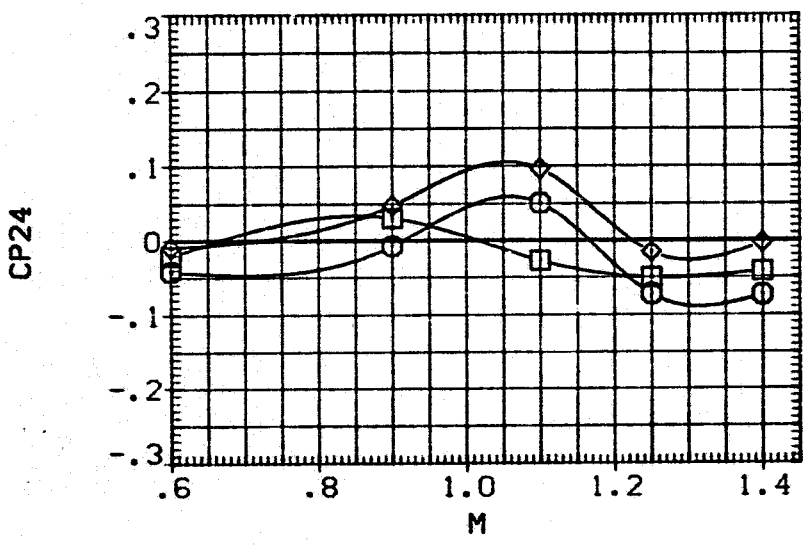
(HE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

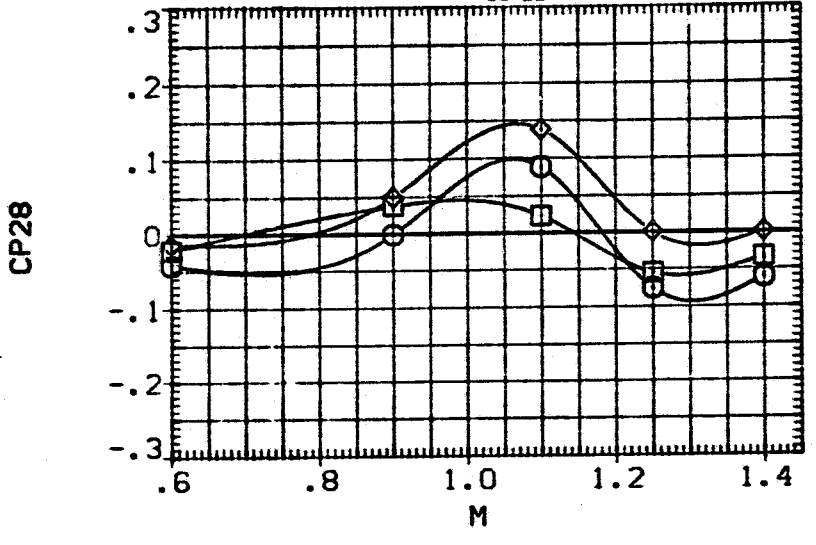
| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | HE4Y28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | HE4Y30 | 1.100 |
| ◇ | 4.000 | | | | | HE4Y32 | 1.400 |

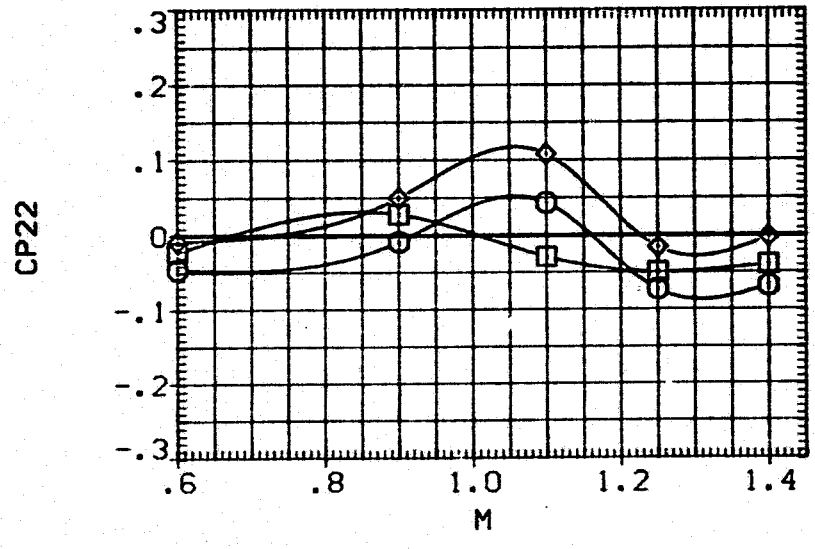
| DATASET | MACH |
|---|---|
| HE4Y29 | .900 |
| HE4Y31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



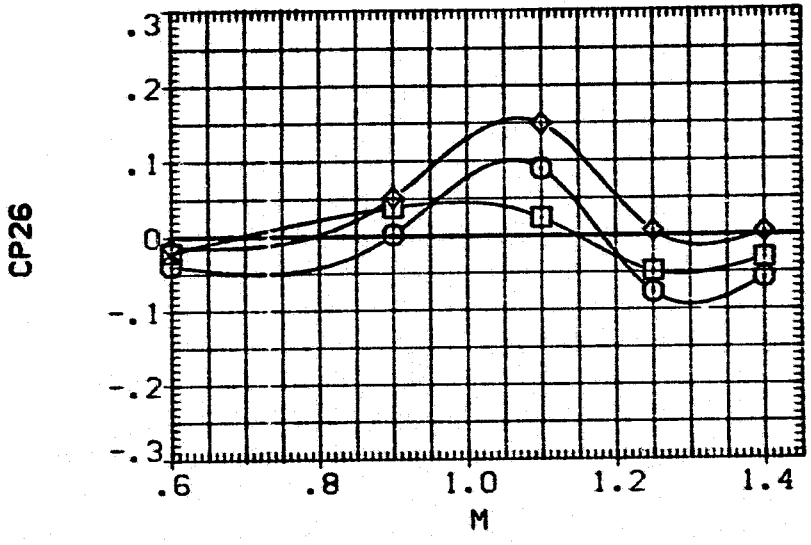




FIG. 127 ORB VENT PRESSURES

(HE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○□ | -4.000 | ALPHA | .000 | ELV-IB | .000 | HE4Y28 | .600 | HE4Y29 | .900 |
| | .000 | ELV-OB | .000 | RN/L | 3.400 | HE4Y30 | 1.100 | HE4Y31 | 1.250 |
| ◇ | 4.000 | | | | | HE4Y32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMPP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

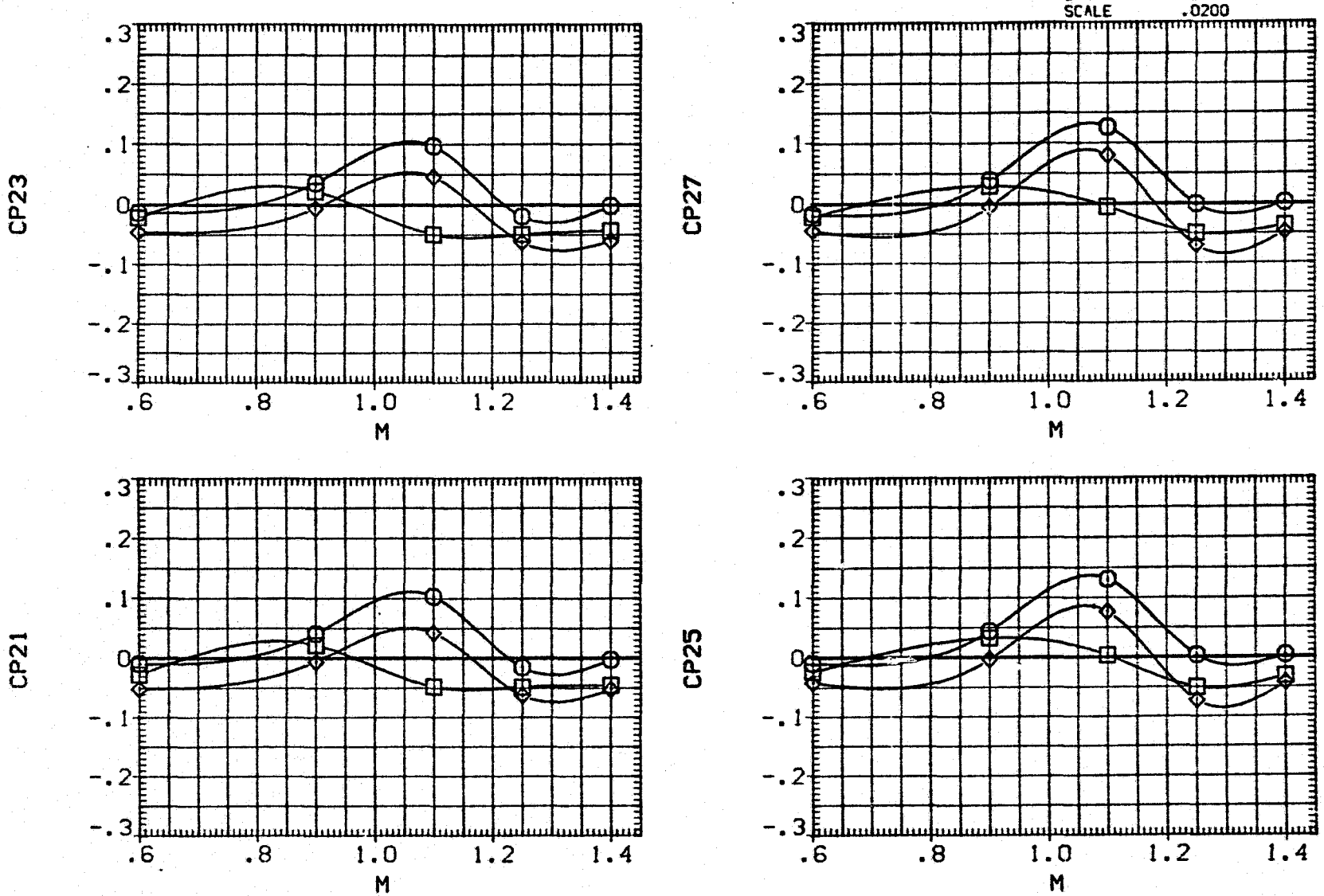



FIG. 127 ORB VENT PRESSURES

(JE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ... | -4.000 | BETA | .000 | ELV-IB | .000 | JE4Z28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | JE4Z30 | 1.100 |
| ◇ | 4.000 | | | | | JE4Z32 | 1.400 |

| DATASET | MACH |
|---|---|
| JE4Z29 | .900 |
| JE4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

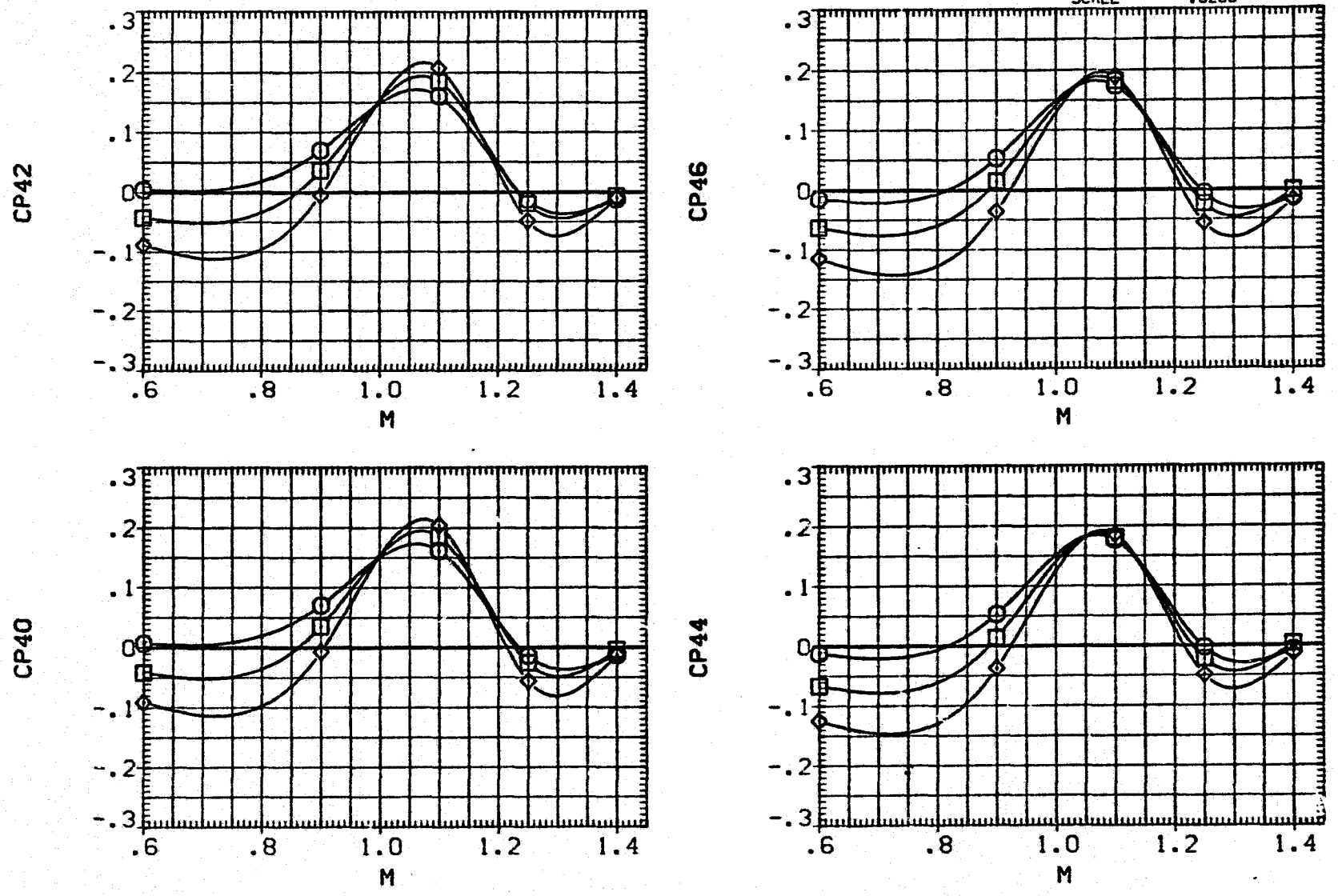



FIG. 127 ORB VENT PRESSURES

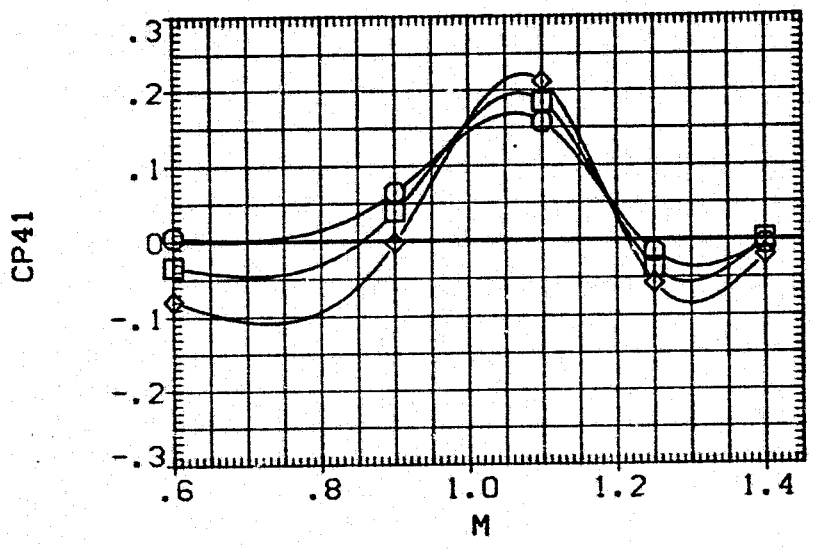
(JE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

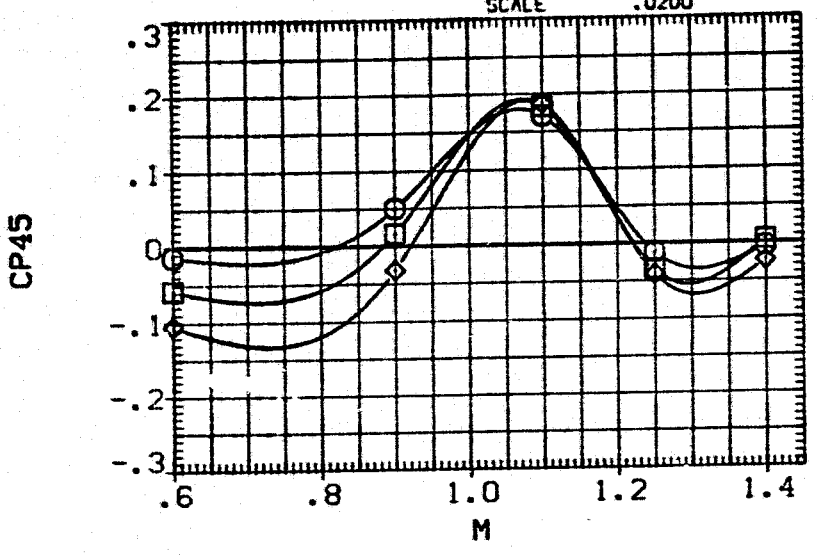
| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | JE4Z28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | JE4Z30 | 1.100 |
| ◇ | 4.000 | | | | | JE4Z32 | 1.400 |

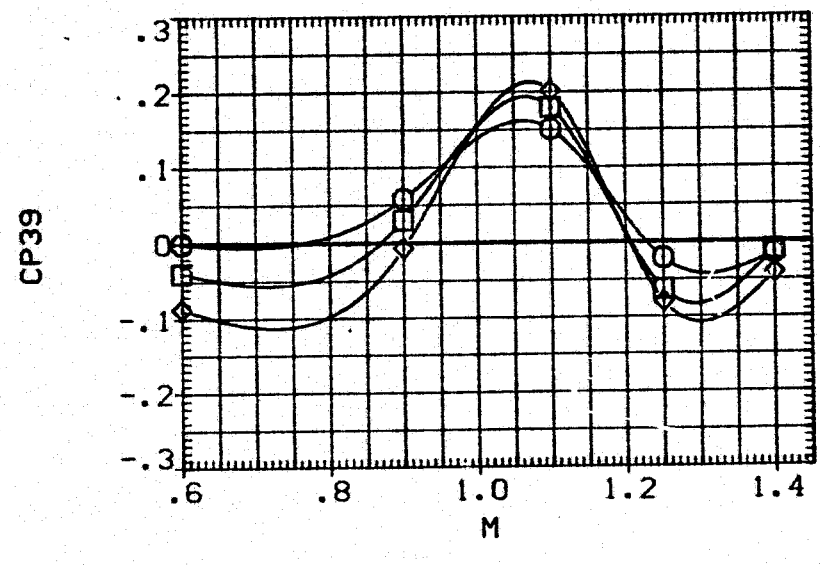
| DATASET | MACH |
|---|---|
| JE4Z29 | .900 |
| JE4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



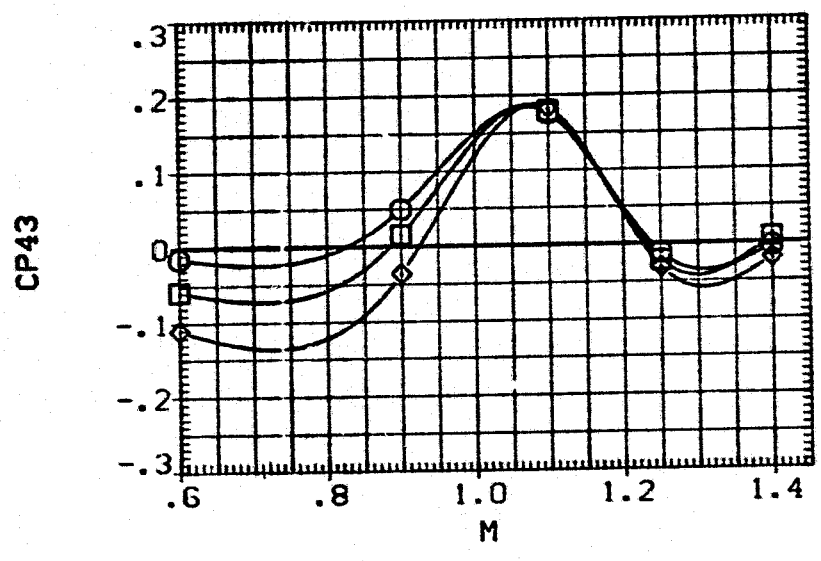



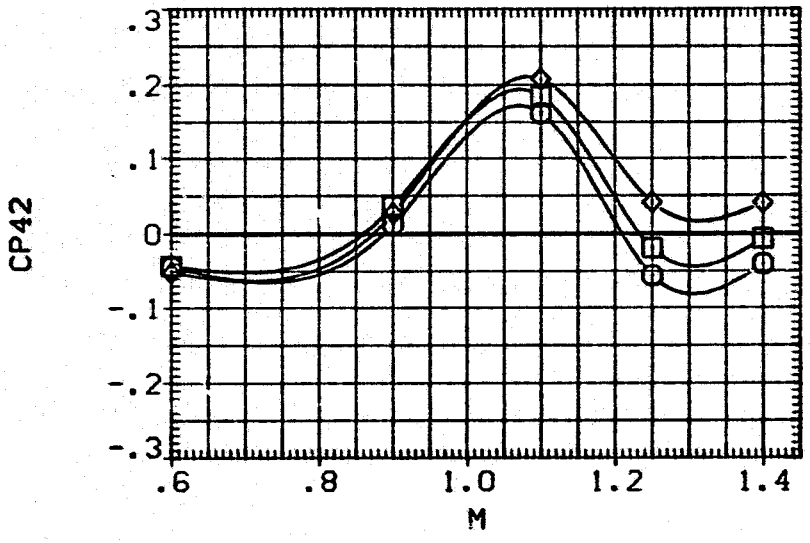

FIG. 127 ORB VENT PRESSURES

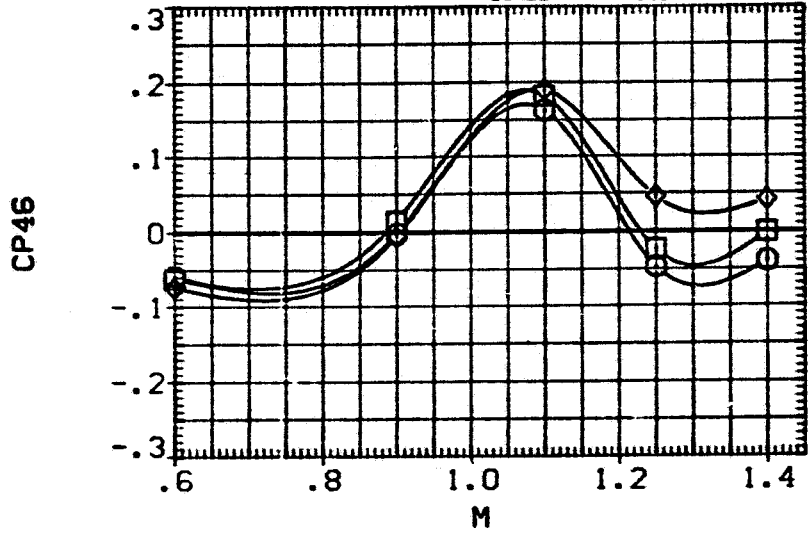
(JE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

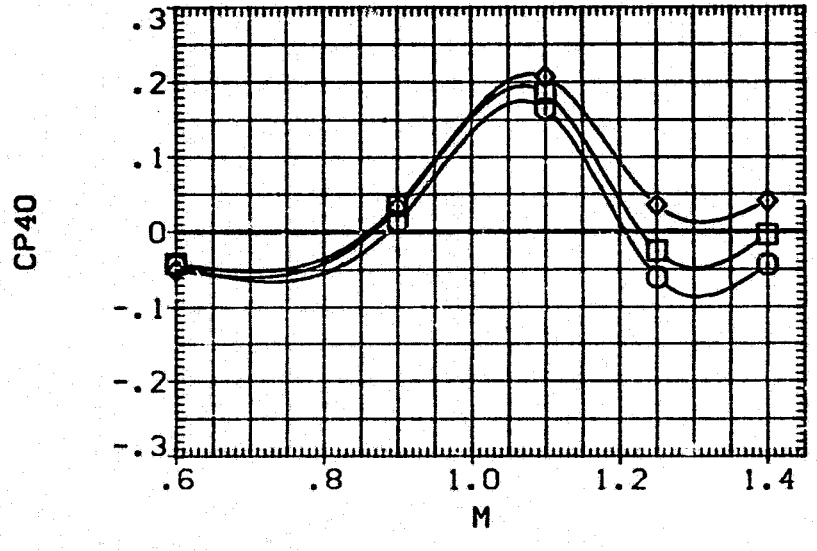
| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | JE4Y28 | .600 | JE4Y29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | JE4Y30 | 1.100 | JE4Y31 | 1.250 |
| ◇ | 4.000 | | | | | JE4Y32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



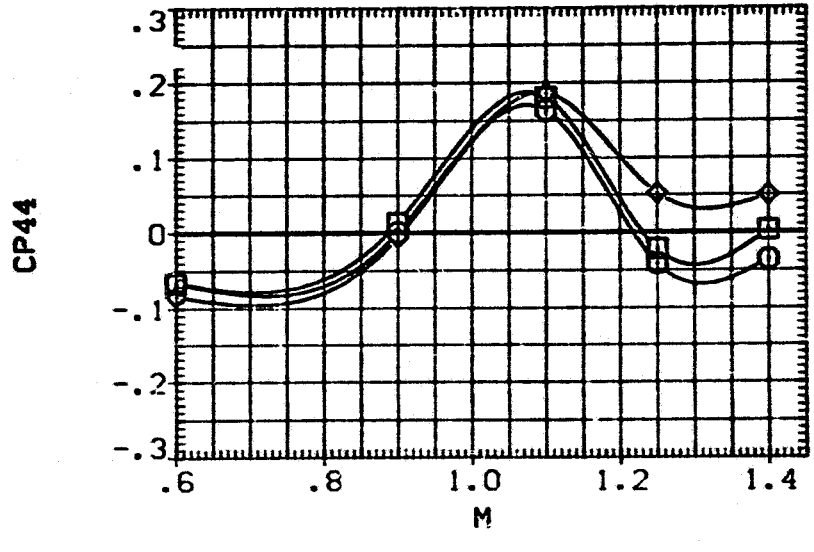




FIG. 127 ORB VENT PRESSURES

(JE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | JE4Y28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | JE4Y30 | 1.100 |
| ◇ | 4.000 | | | | | JE4Y32 | 1.400 |

| DATASET | MACH |
|---|---|
| JE4Y29 | .900 |
| JE4Y31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

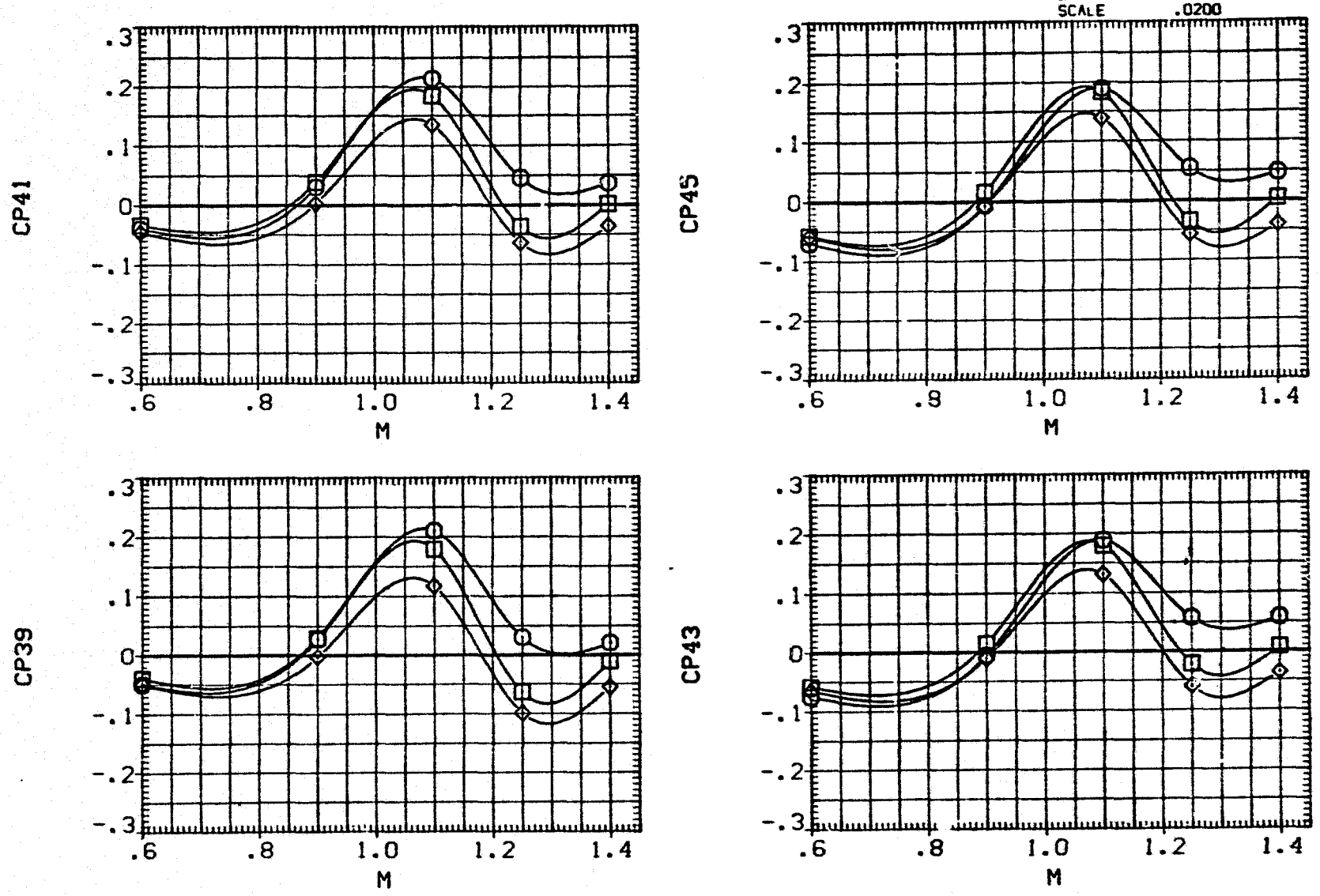



FIG. 127 ORB VENT PRESSURES

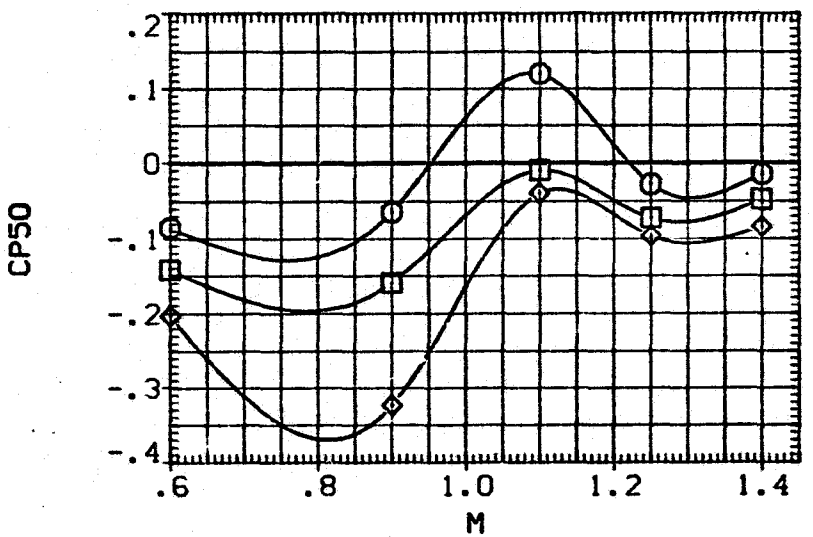
(KE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

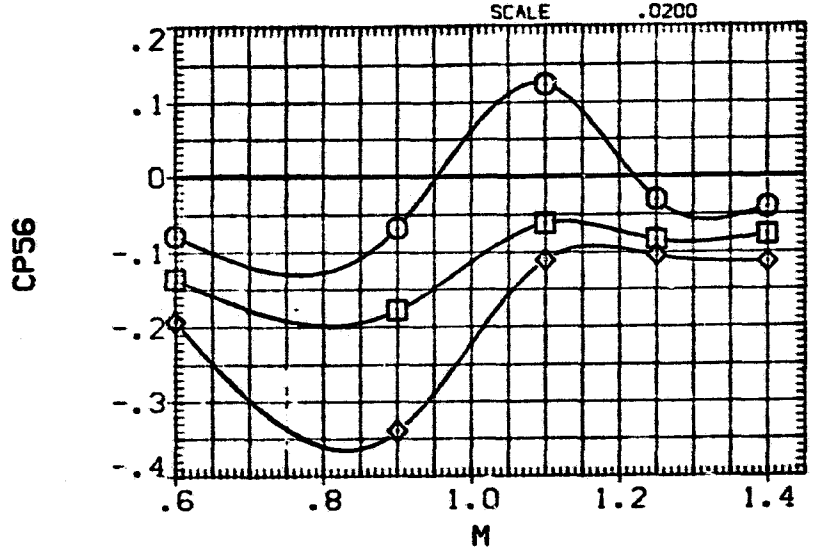
| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| □ | -4.000 | BETA | .000 | ELV-IB | .000 | KE4Z28 | .600 |
| ▢ | .000 | ELV-OB | .000 | RN/L | 3.400 | KE4Z30 | 1.100 |
| ◇ | 4.000 | | | | | KE4Z32 | 1.400 |

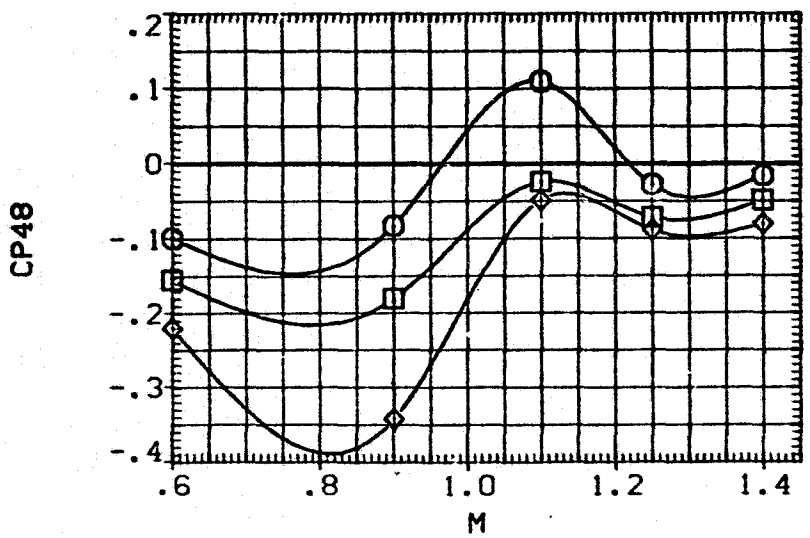
| DATASET | MACH |
|---|---|
| KE4Z29 | .900 |
| KE4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



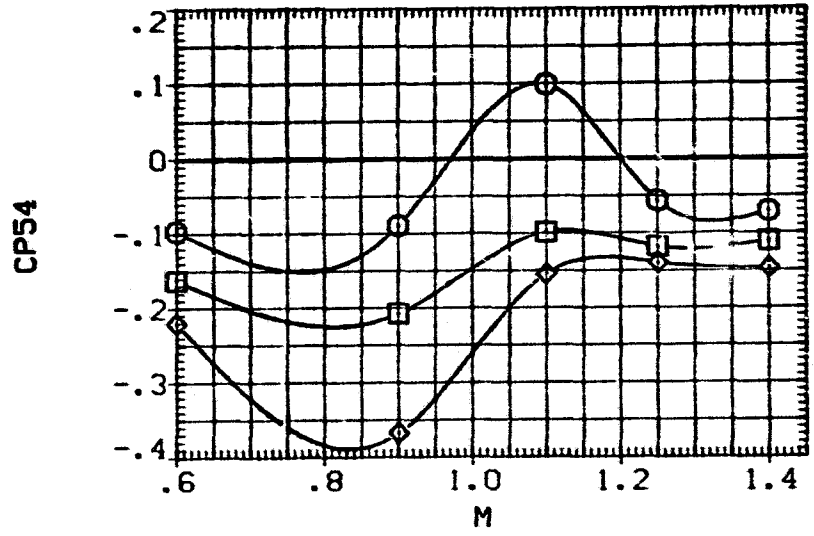




FIG. 127 ORB VENT PRESSURES

(KE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | KE4Z28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | KE4Z30 | 1.100 |
| ◇ | 4.000 | | | | | KE4Z32 | 1.400 |

| DATASET | MACH |
|---|---|
| KE4Z29 | .900 |
| KE4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

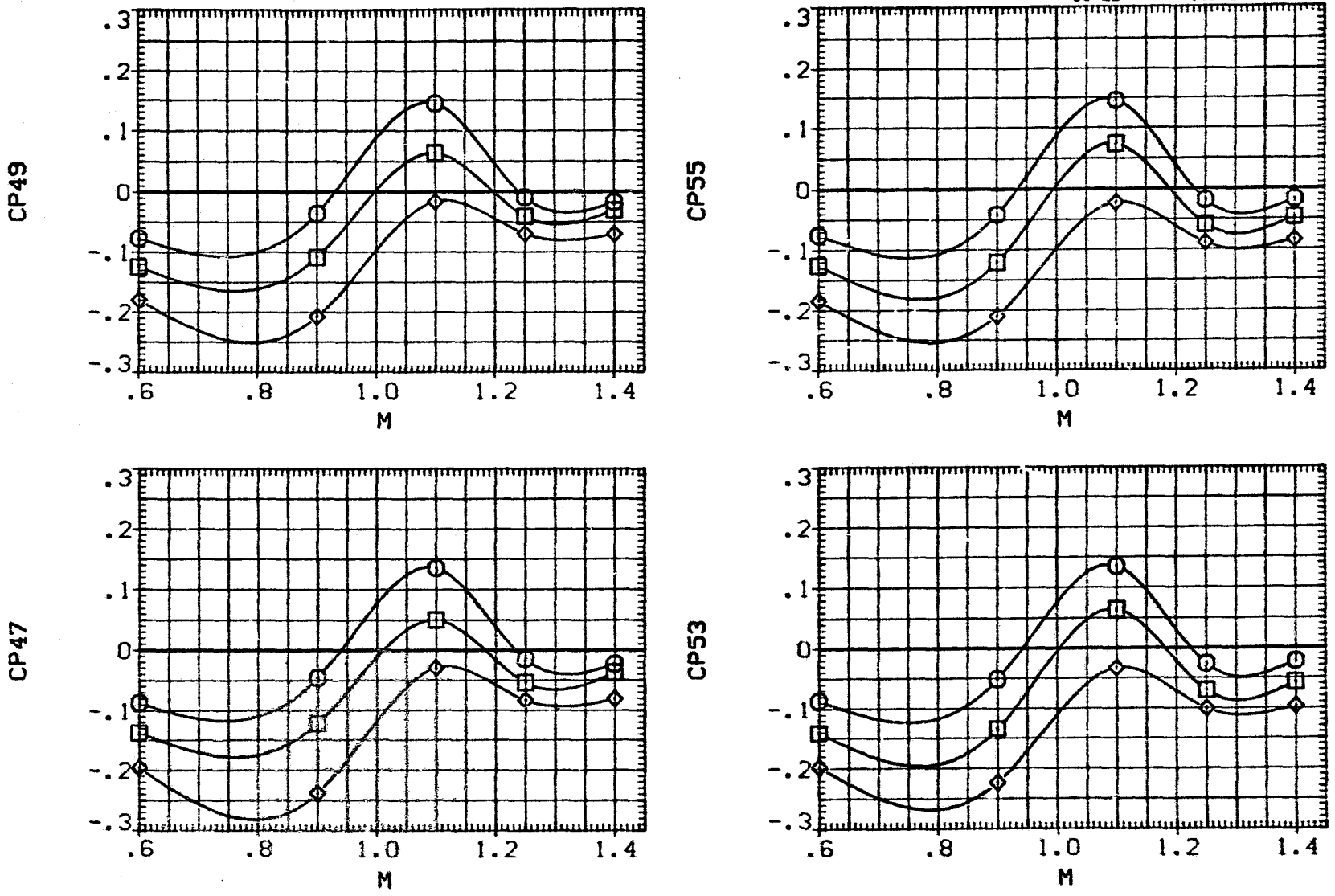



FIG. 127 ORB VENT PRESSURES

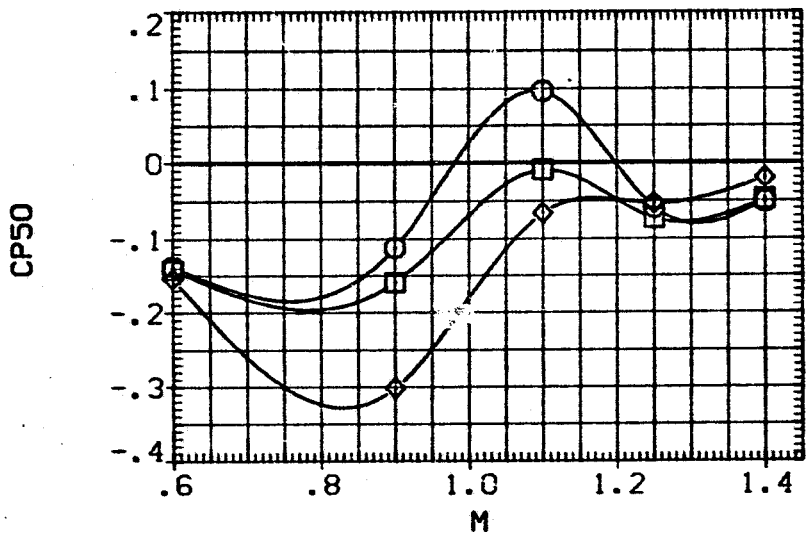
(KE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

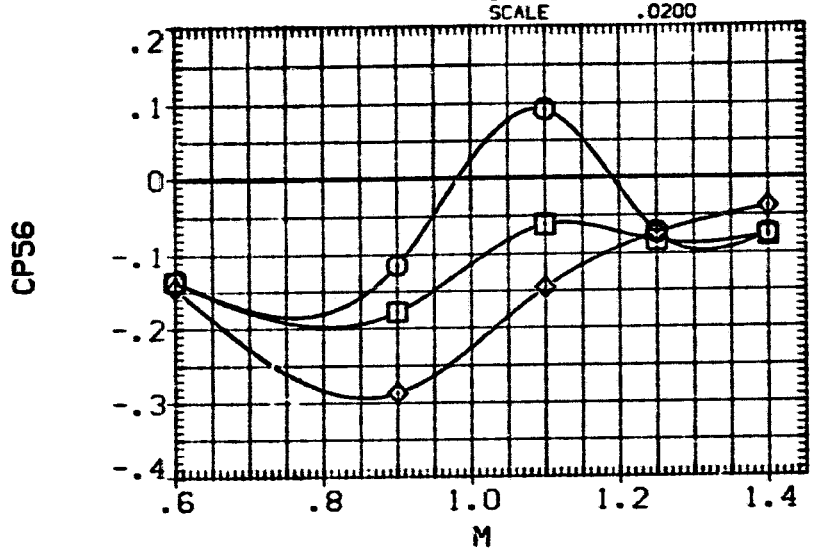
| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | KE4Y28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | KE4Y30 | 1.100 |
| ◇ | 4.000 | | | | | KE4Y32 | 1.400 |

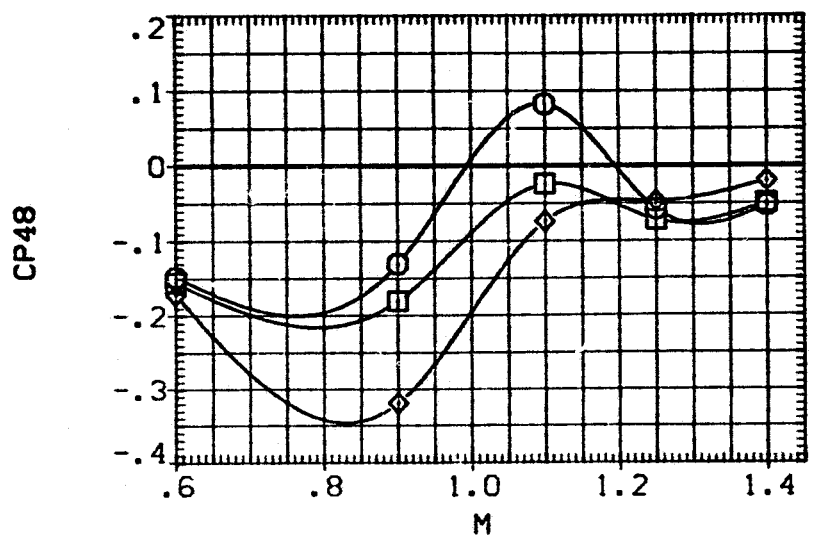
| DATASET | MACH |
|---|---|
| KE4Y29 | .900 |
| KE4Y31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



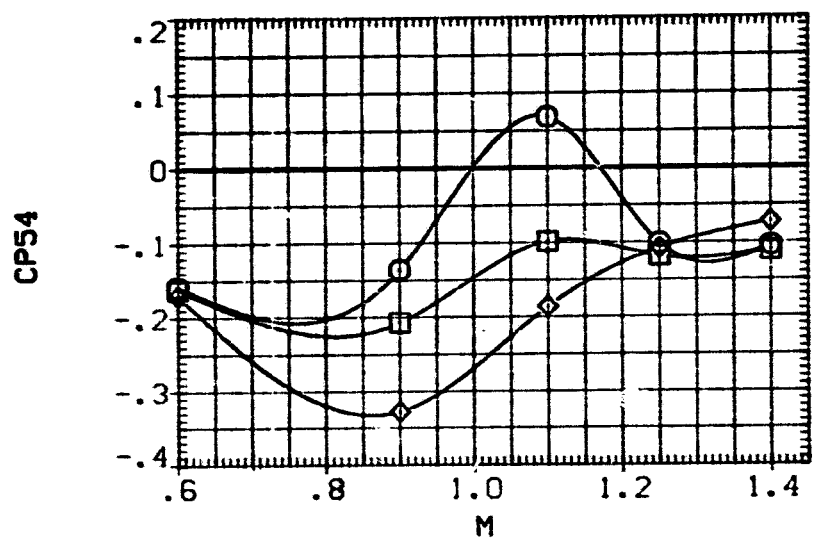




FIG. 127 ORB VENT PRESSURES

(KE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | KE4Y28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | KE4Y30 | 1.100 |
| ◇ | 4.000 | | | | | KE4Y32 | 1.400 |

| DATASET | MACH |
|---|---|
| KE4Y29 | .900 |
| KE4Y31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

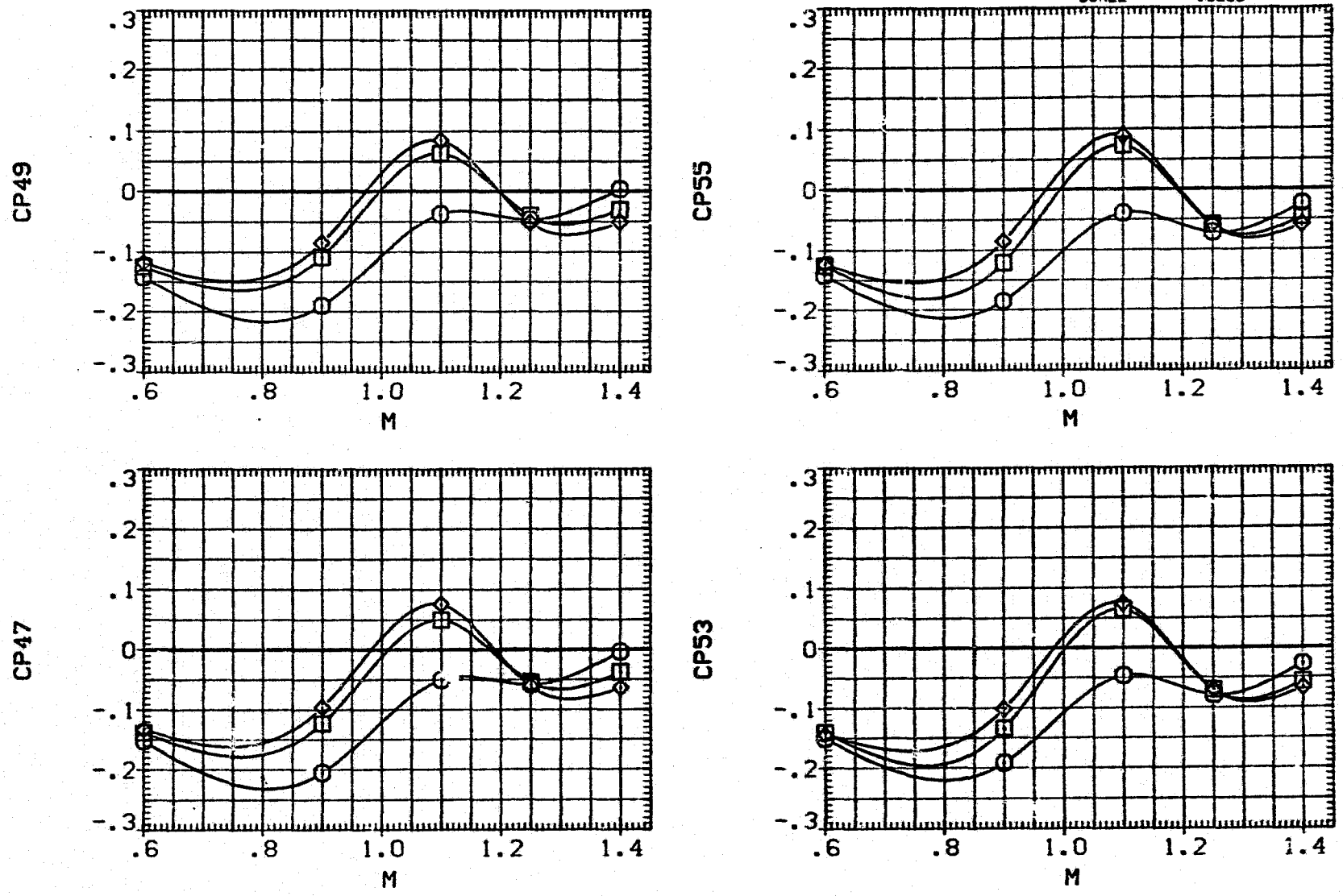



FIG. 127 ORB VENT PRESSURES

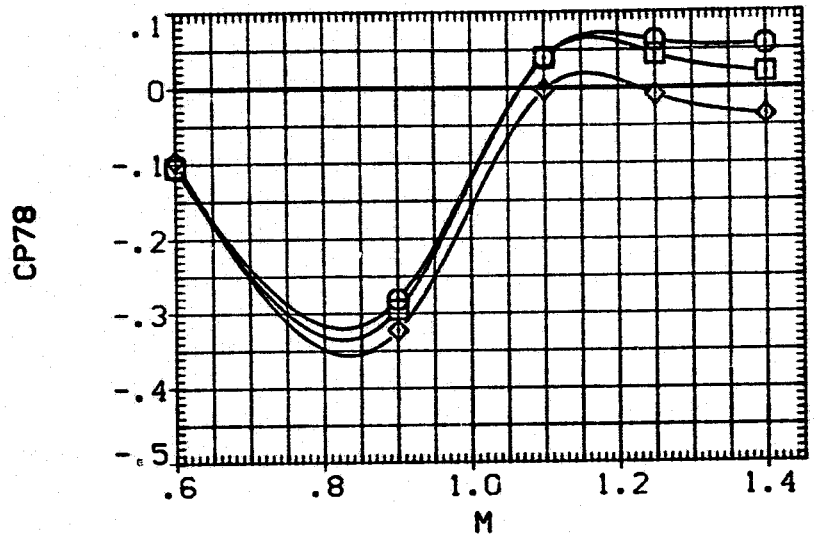
(DE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

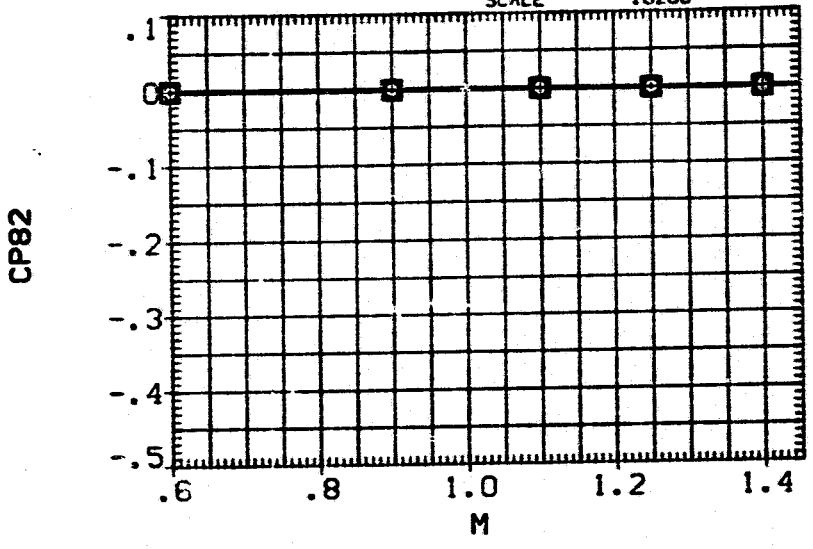
| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | DE4Z28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | DE4Z30 | 1.100 |
| ◇ | 4.000 | | | | | DE4Z32 | 1.400 |

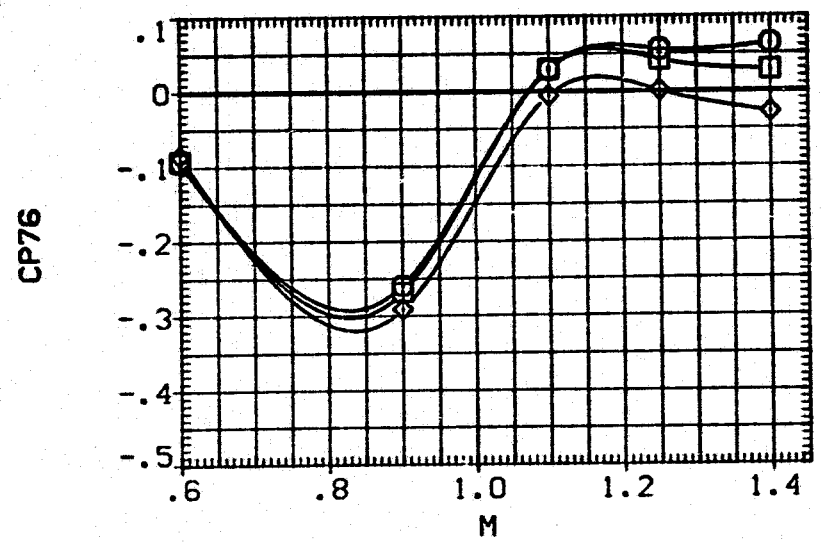
| DATASET | MACH |
|---|---|
| DE4Z29 | .900 |
| DE4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



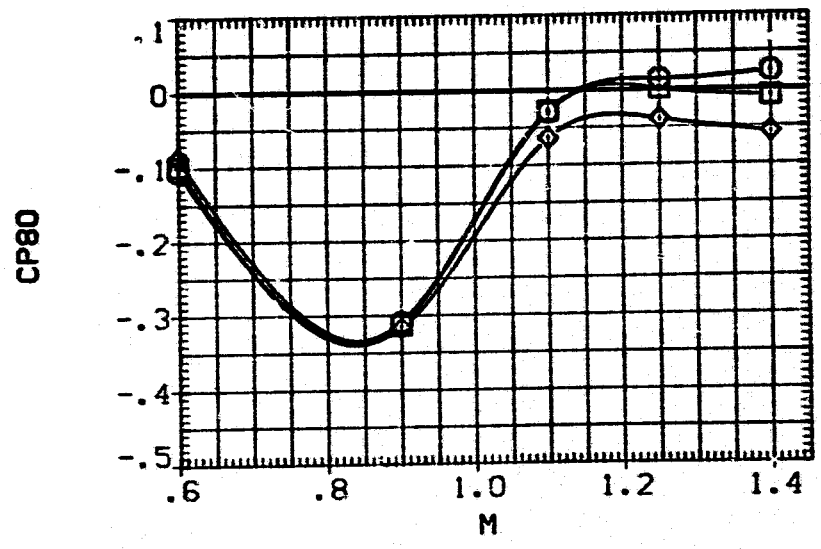




FIG. 127 ORB VENT PRESSURES

(DE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | DE4Z28 | .600 | DE4Z29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | DE4Z30 | 1.100 | DE4Z31 | 1.250 |
| ◇ | 4.000 | | | | | DE4Z32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

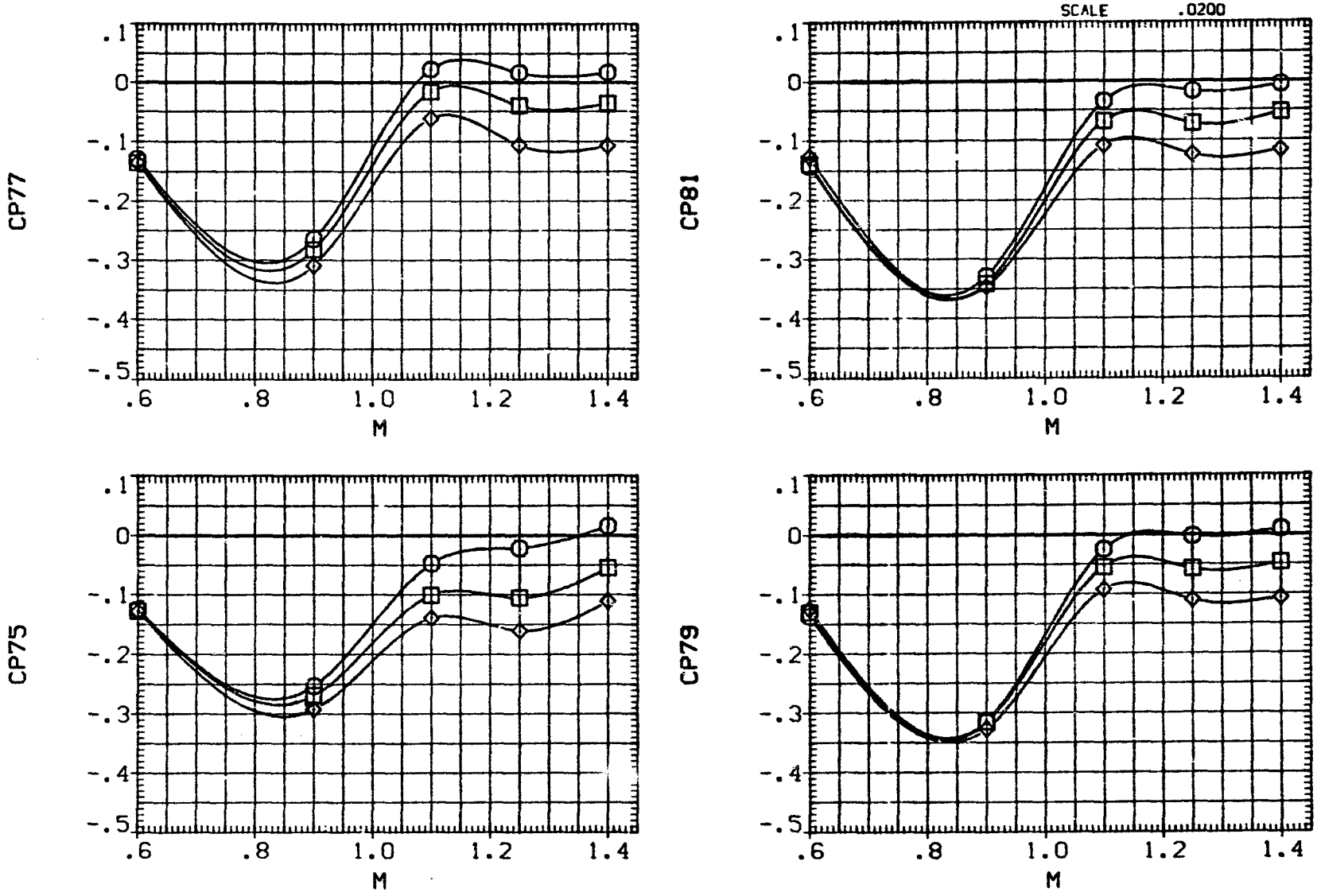



FIG. 127 ORB VENT PRESSURES

(DE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | DE4Y28 | .600 | DE4Y29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | DE4Y30 | 1.100 | DE4Y31 | 1.250 |
| ◇ | 4.000 | | | | | DE4Y32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

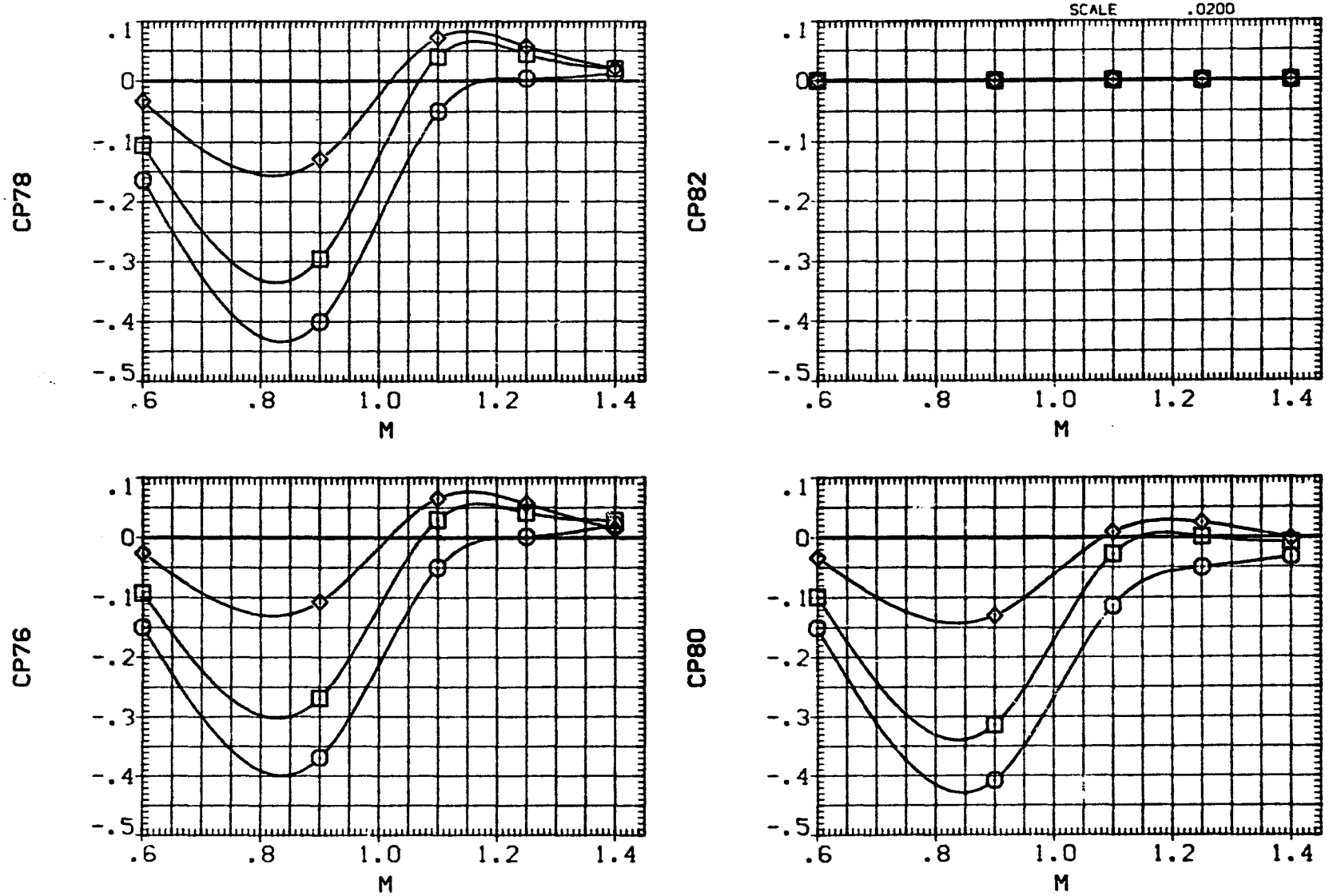



FIG. 127 ORB VENT PRESSURES

(DE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | DE4Y28 | .600 | DE4Y29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | DE4Y30 | 1.100 | DE4Y31 | 1.250 |
| ◇ | 4.000 | | | | | DE4Y32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

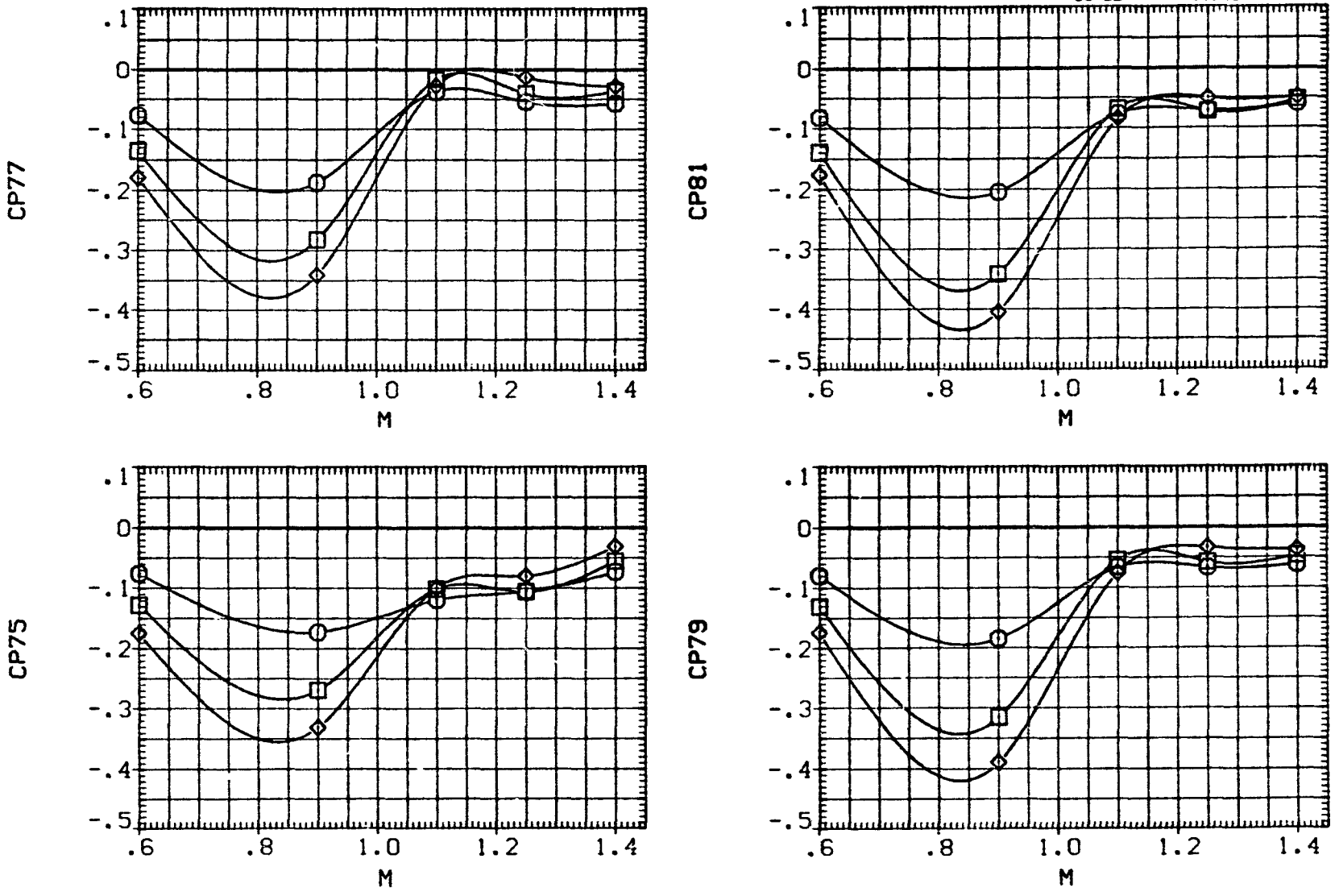



FIG. 127 ORB VENT PRESSURES

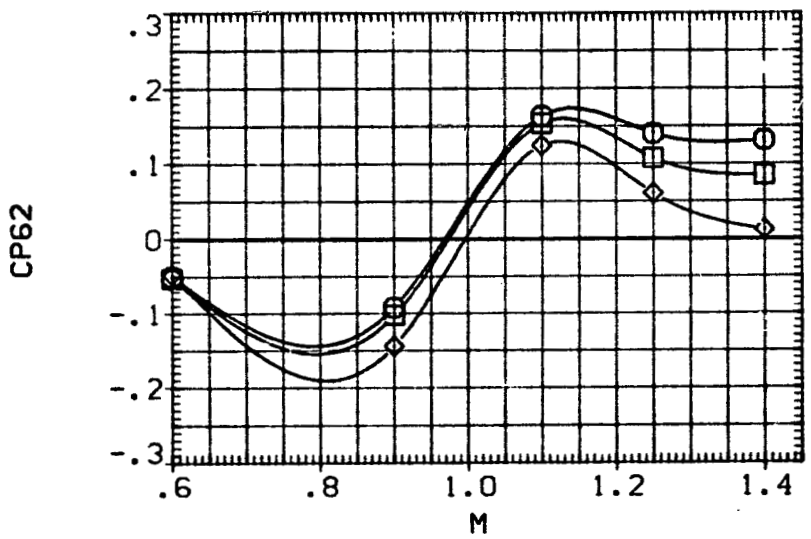
(LE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

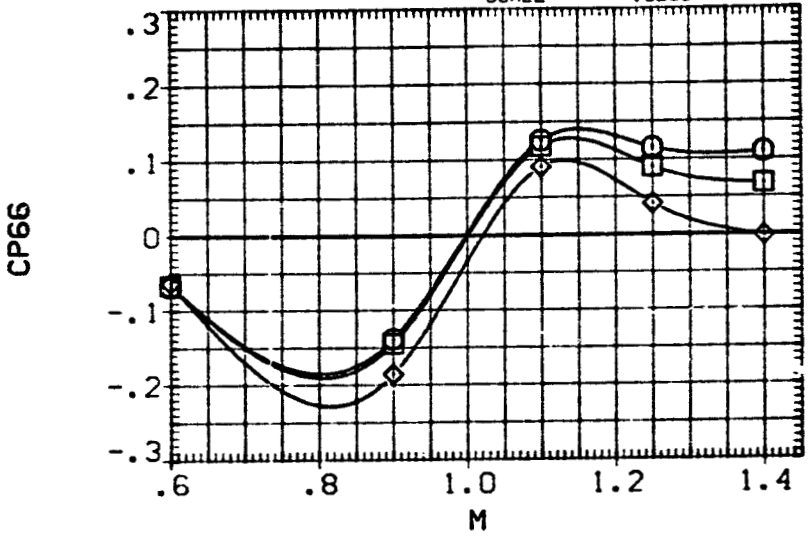
| SYMBOL | ALPHA | | PARAMETRIC VALUES | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | LE4Z28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | LE4Z30 | 1.100 |
| ◇ | 4.000 | | | | | LE4Z32 | 1.400 |

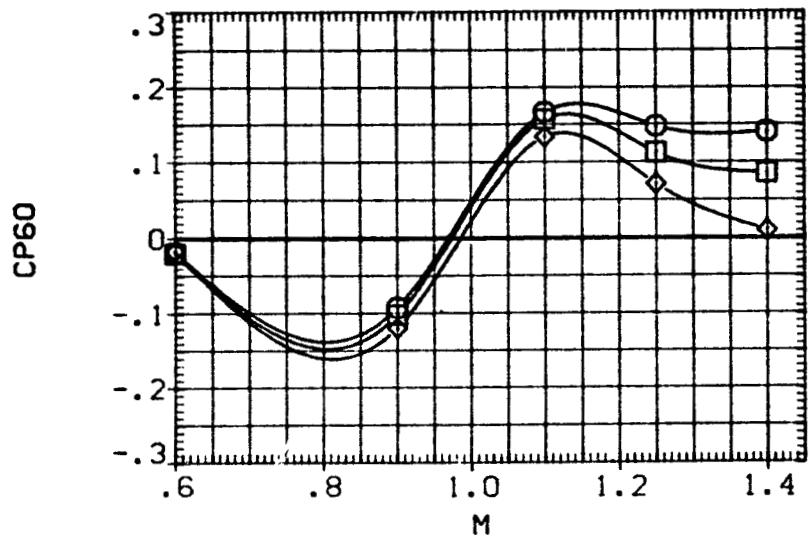
| DATASET | MACH |
|---|---|
| LE4Z29 | .900 |
| LE4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



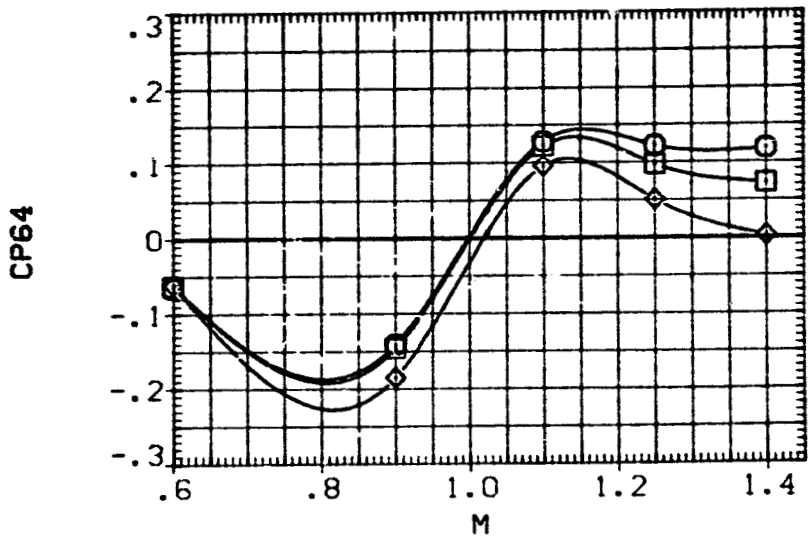




FIG. 127 ORB VENT PRESSURES

(LE4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | LE4Z28 | .600 | LE4Z29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | LE4Z30 | 1.100 | LE4Z31 | 1.250 |
| ◇ | 4.000 | | | | | LE4Z32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

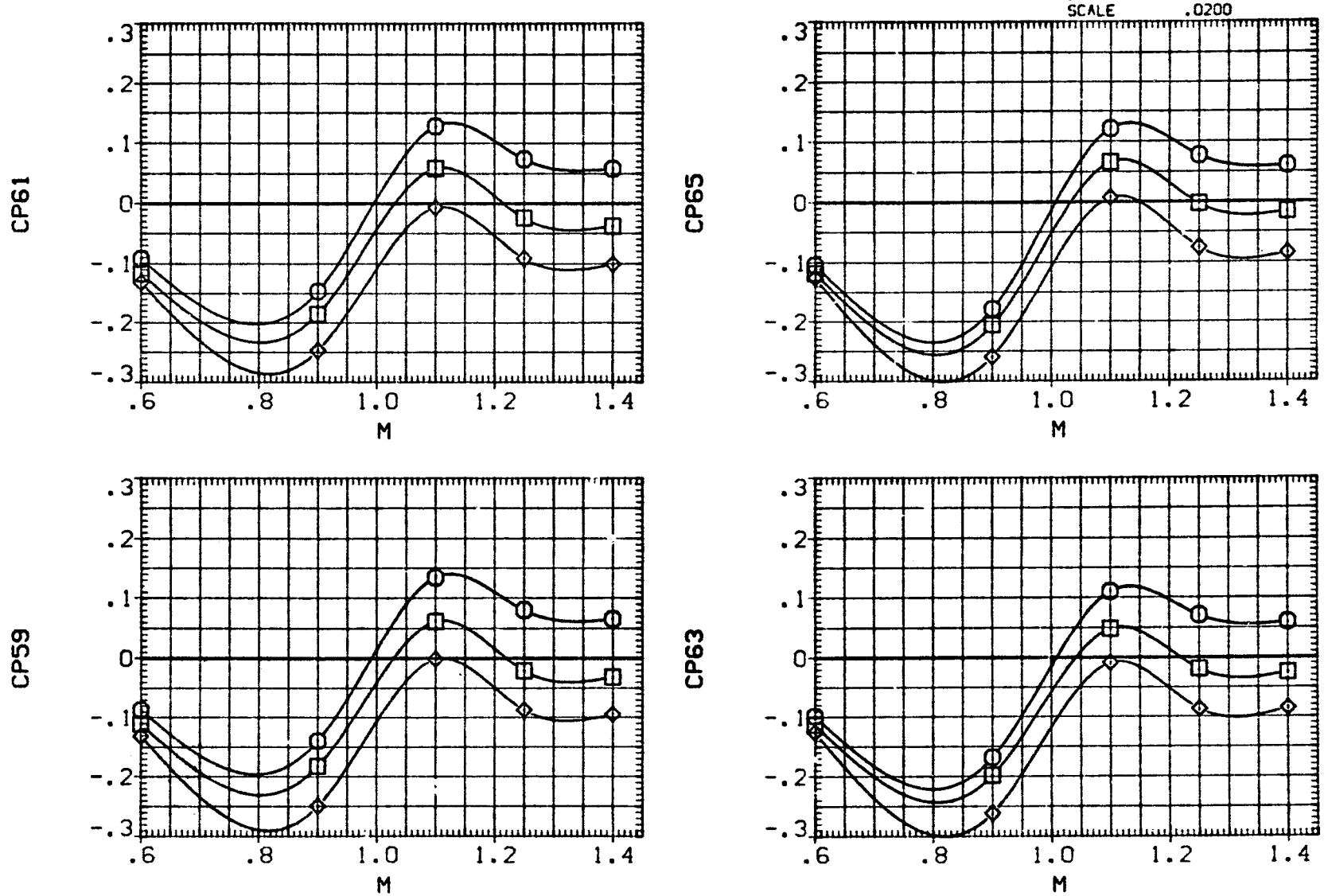


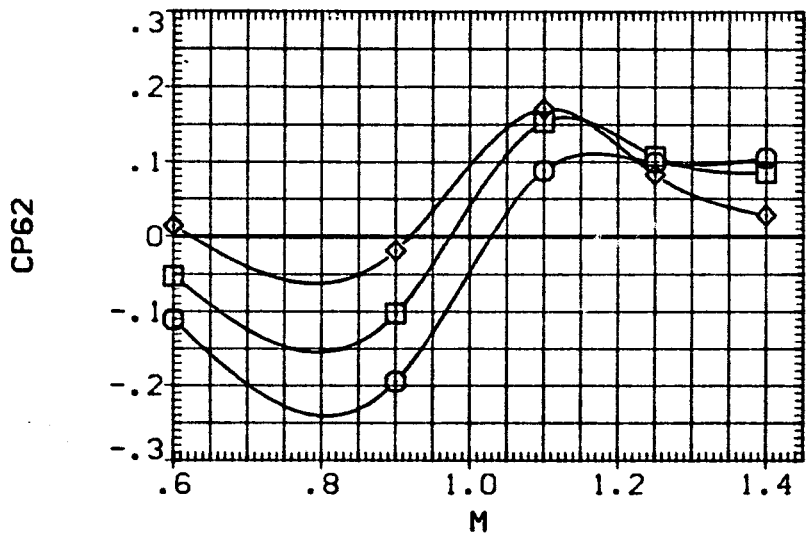

FIG. 127 ORB VENT PRESSURES

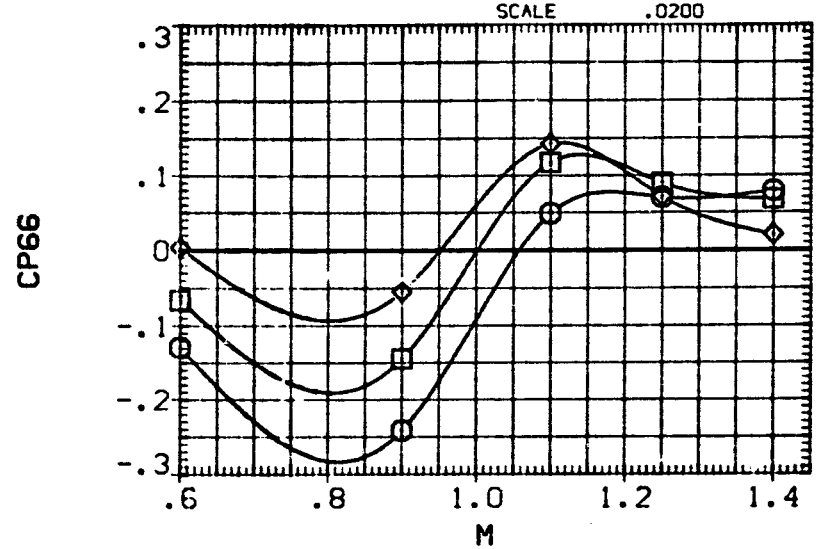
(LE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

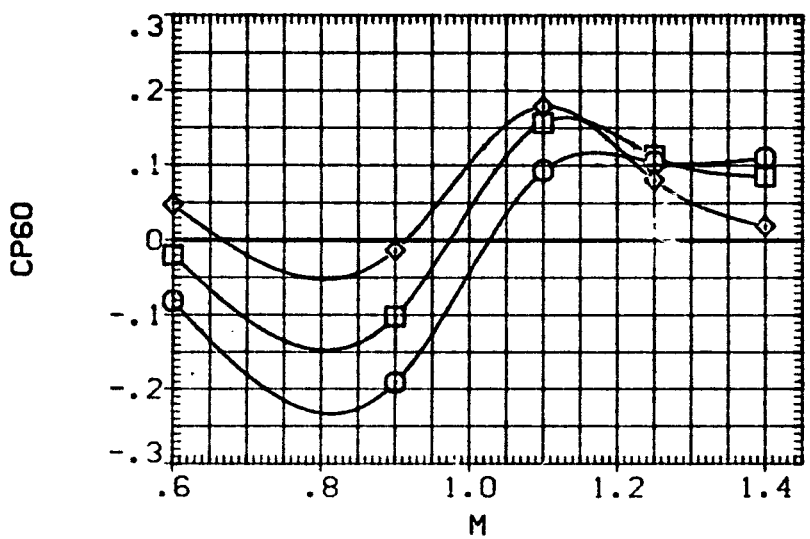
| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | LE4Y28 | .600 | LE4Y29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | LE4Y30 | 1.100 | LE4Y31 | 1.250 |
| ◇ | 4.000 | | | | | LE4Y32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



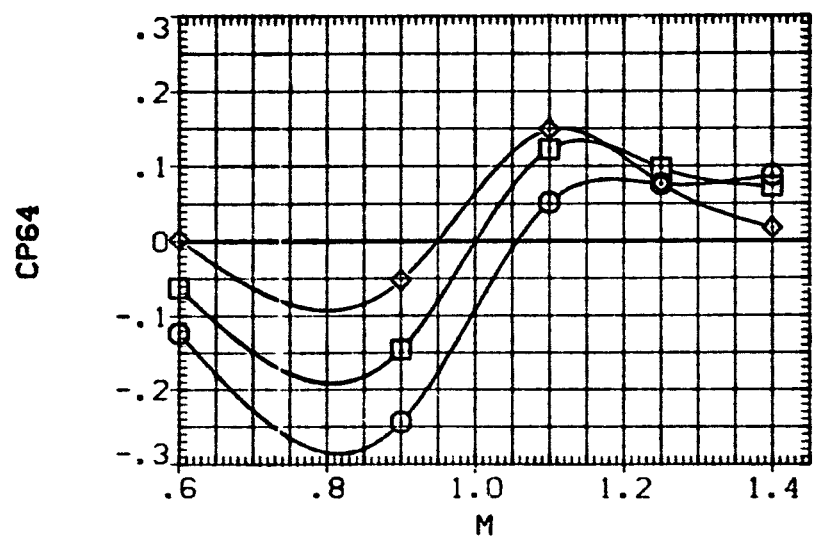




FIG. 127 ORB VENT PRESSURES

(LE4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH |
|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | LE4Y28 | .600 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | LE4Y30 | 1.100 |
| ◇ | 4.000 | | | | | LE4Y32 | 1.400 |

| DATASET | MACH |
|---|---|
| LE4Y29 | .900 |
| LE4Y31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

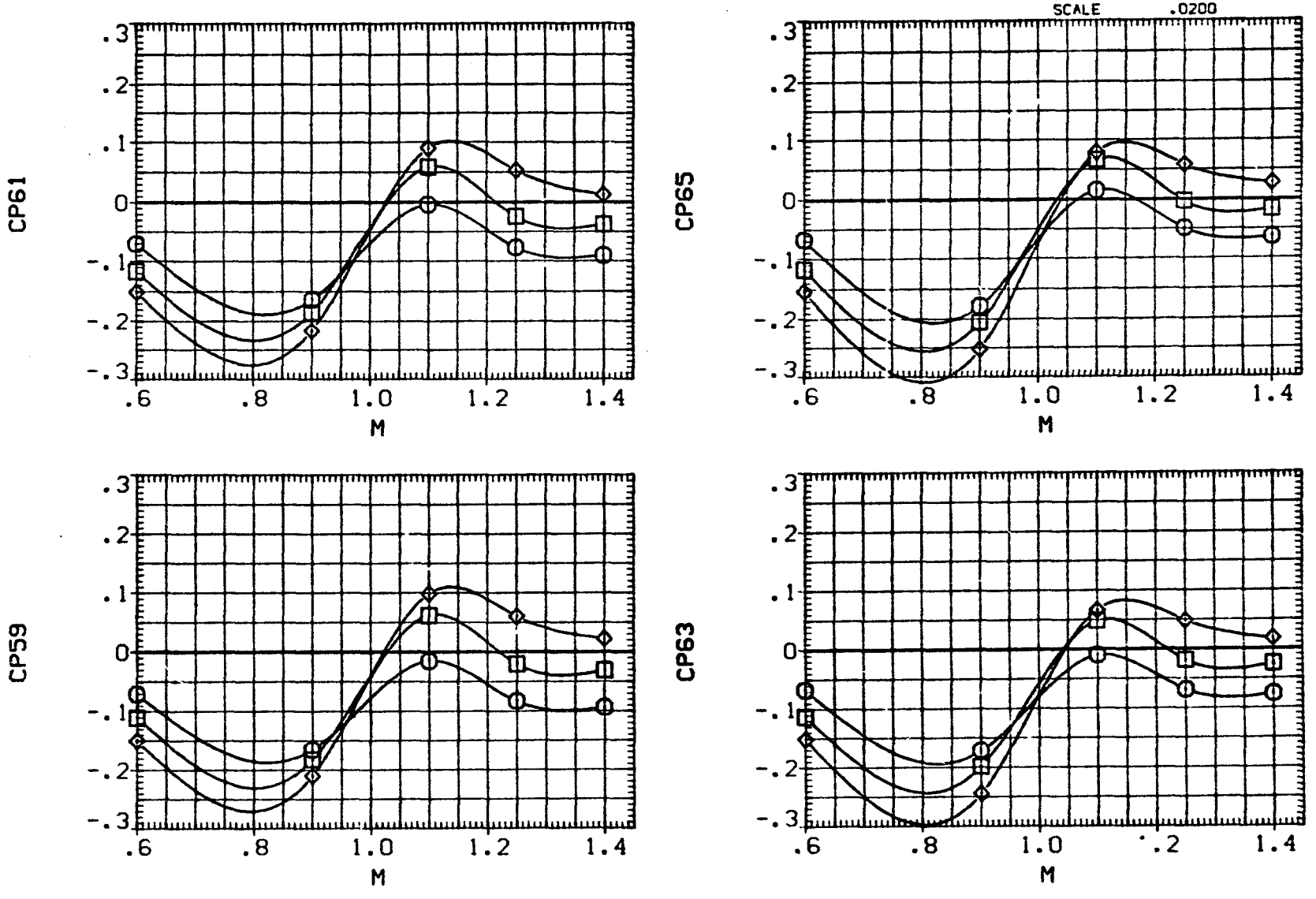



FIG. 127 ORB VENT PRESSURES

(ME4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | ME4Z28 | .600 | ME4Z29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | ME4Z30 | 1.100 | ME4Z31 | 1.250 |
| ◇ | 4.000 | | | | | ME4Z32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

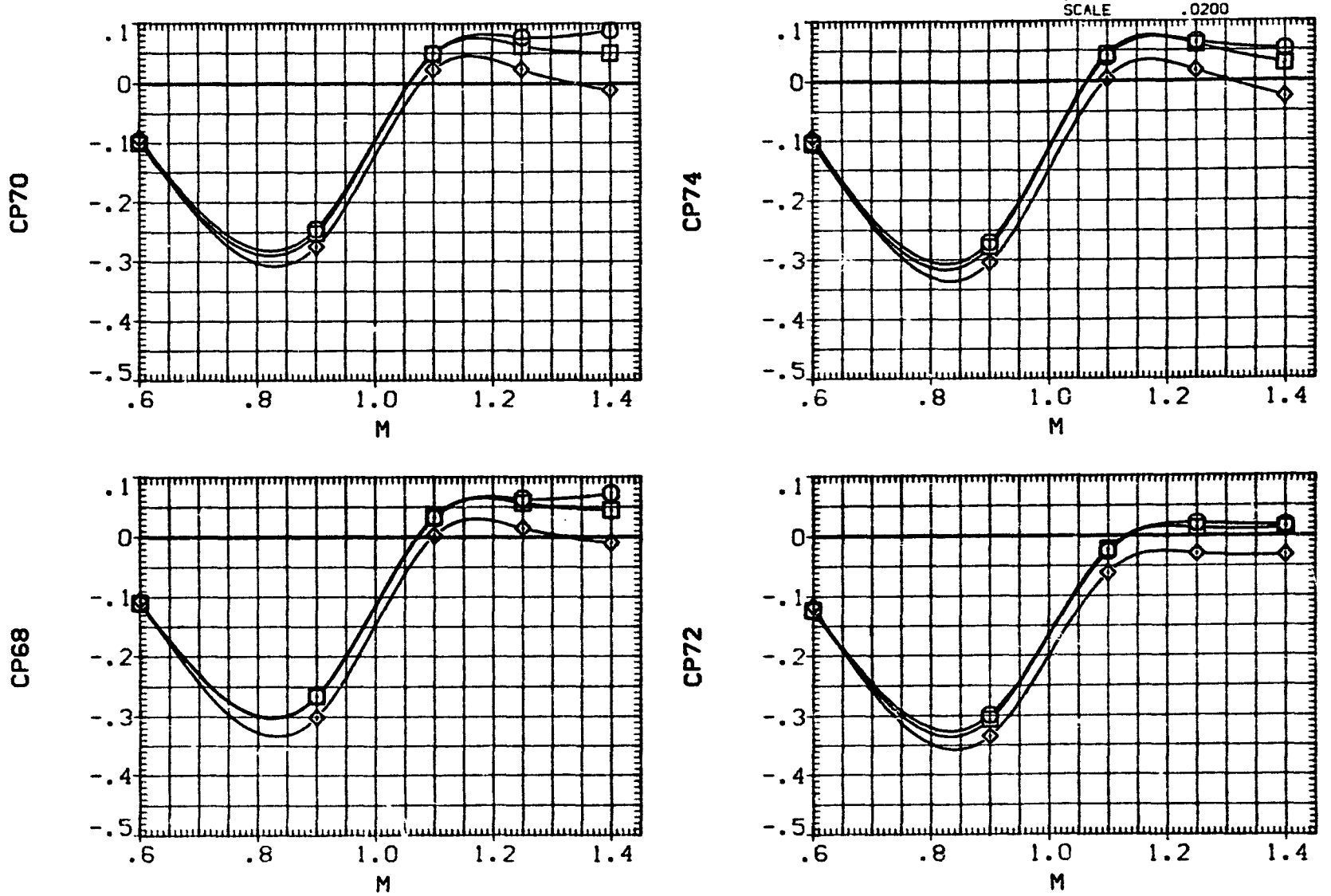



FIG. 127 ORB VENT PRESSURES

(ME4Z28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA |
|---|---|
| ○ | -4.000 |
| □ | .000 |
| ◇ | 4.000 |

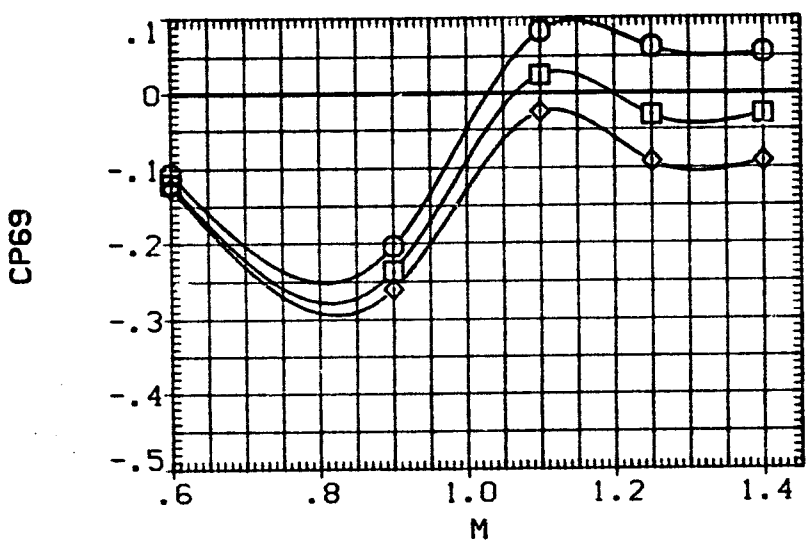
PARAMETRIC VALUES

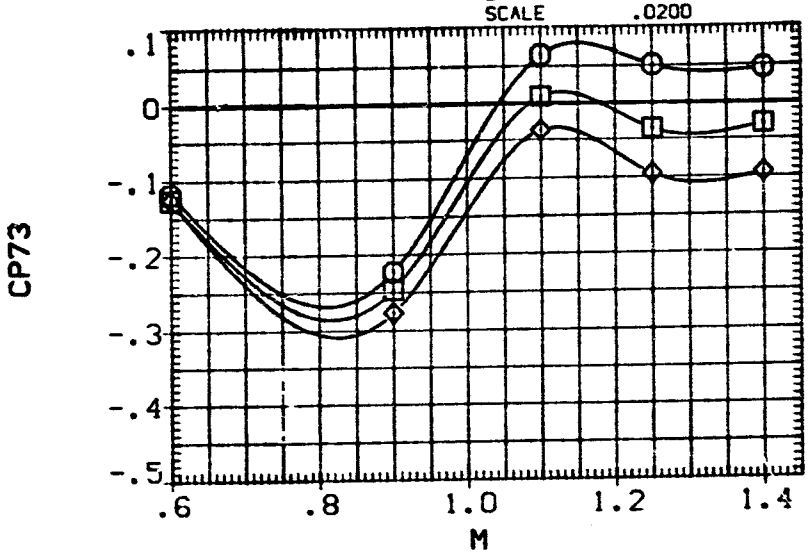
| | | | | |
|---|---|---|---|---|
| BETA | .000 | ELV-IB | .000 | |
| ELV-OB | .000 | RN/L | 3.400 | |

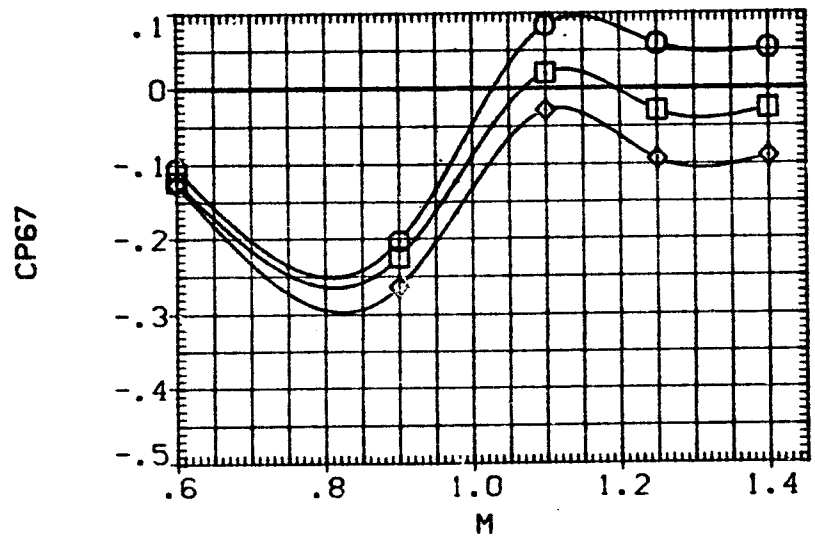
| DATASET | MACH |
|---|---|
| ME4Z28 | .600 |
| ME4Z30 | 1.100 |
| ME4Z32 | 1.400 |
| ME4Z29 | .900 |
| ME4Z31 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



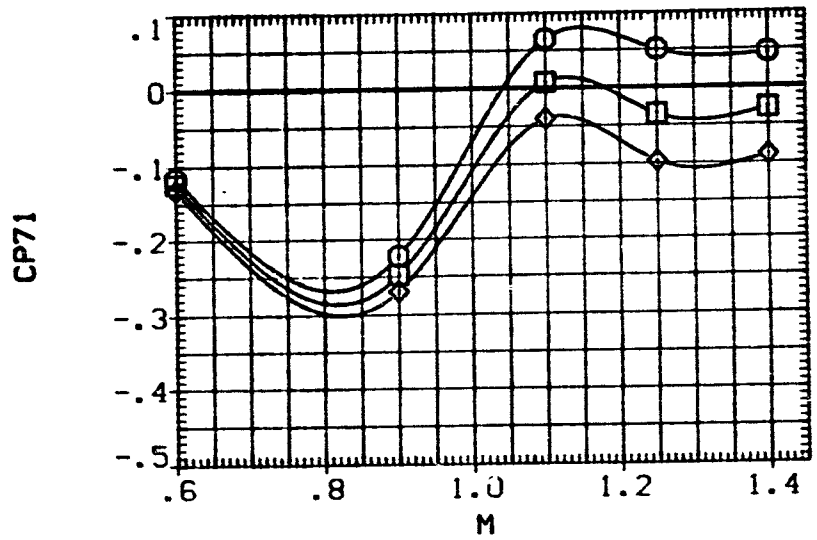




FIG. 127 ORB VENT PRESSURES

(ME4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | ME4Y28 | .600 | ME4Y29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | ME4Y30 | 1.100 | ME4Y31 | 1.250 |
| ◇ | 4.000 | | | | | ME4Y32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

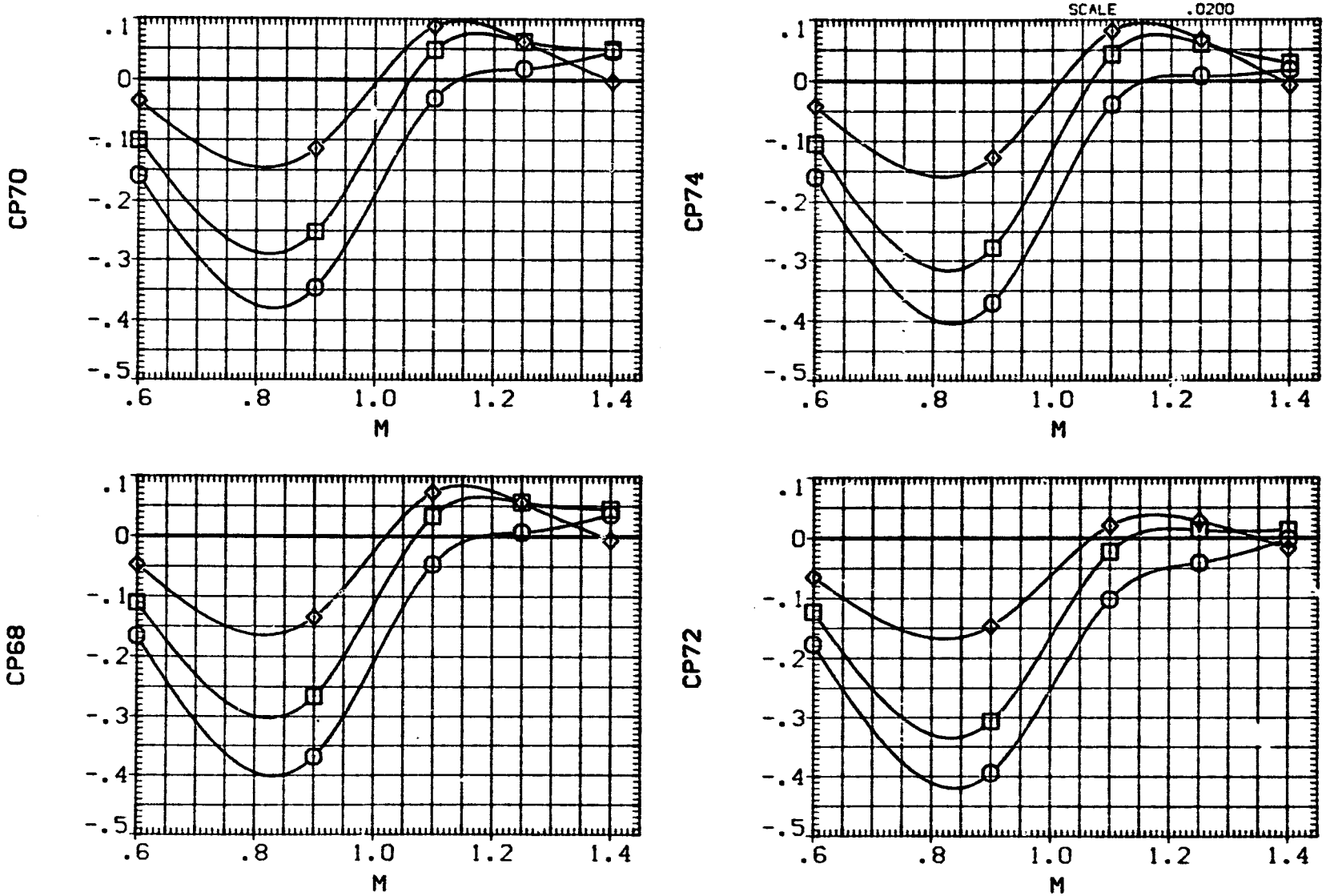


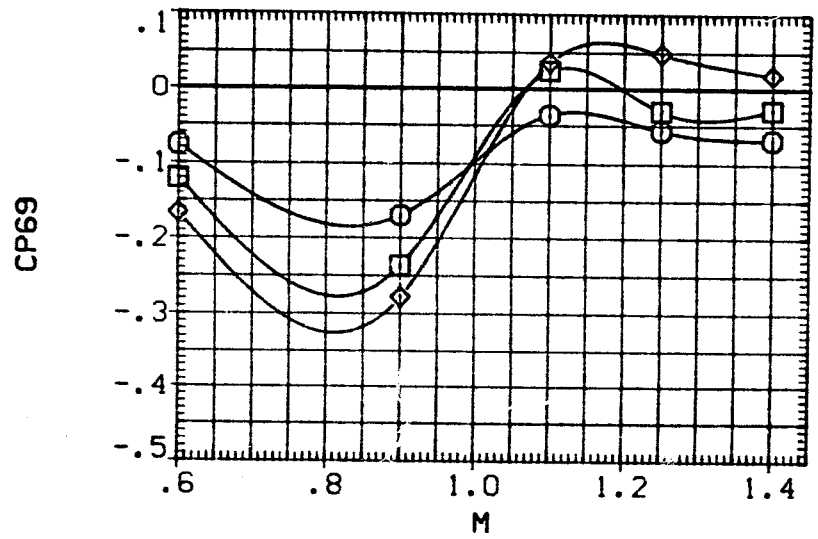

FIG. 127 ORB VENT PRESSURES

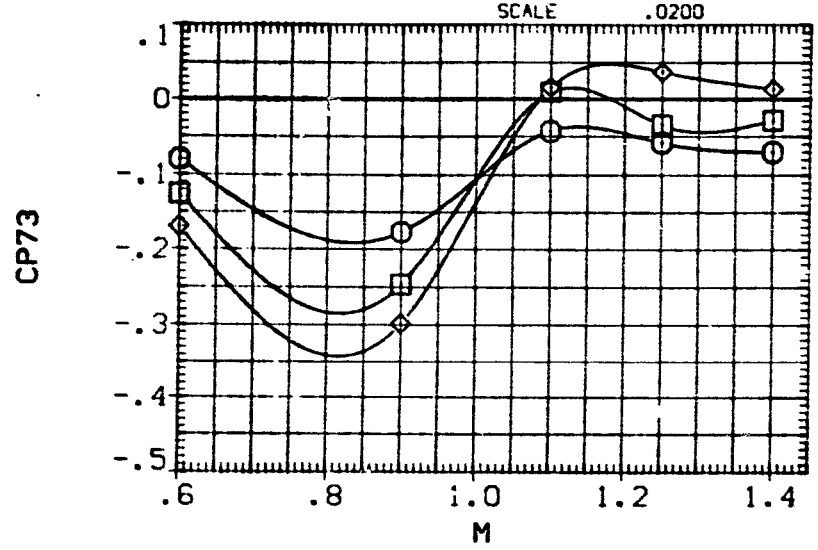
(ME4Y28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

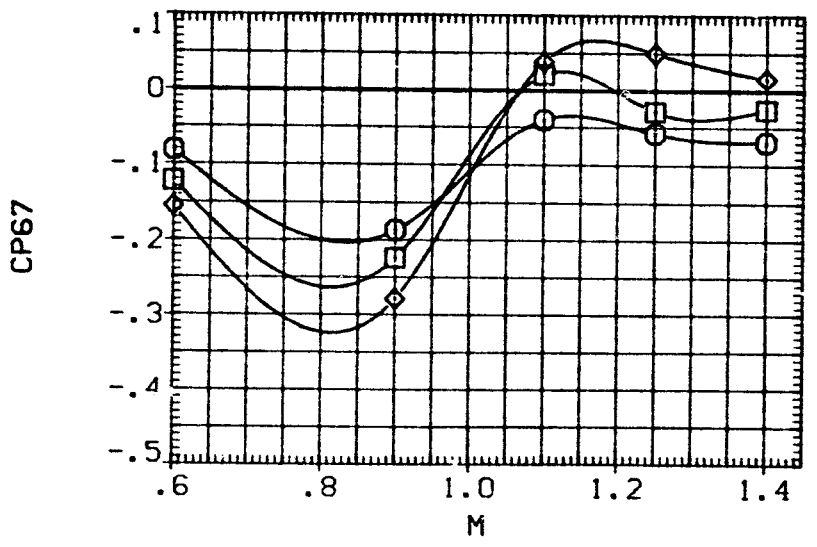
| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| □ | -4.000 | ALPHA | .000 | ELV-IB | .000 | ME4Y28 | .600 | ME4Y29 | .900 |
| ◇□ | .000 | ELV-OB | .000 | RN/L | 3.400 | ME4Y30 | 1.100 | ME4Y31 | 1.250 |
| ◇ | 4.000 | | | | | ME4Y32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



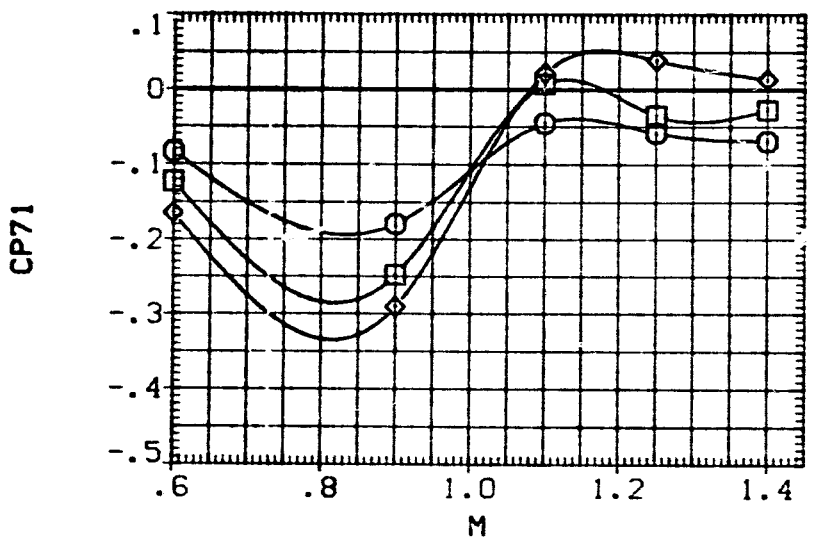



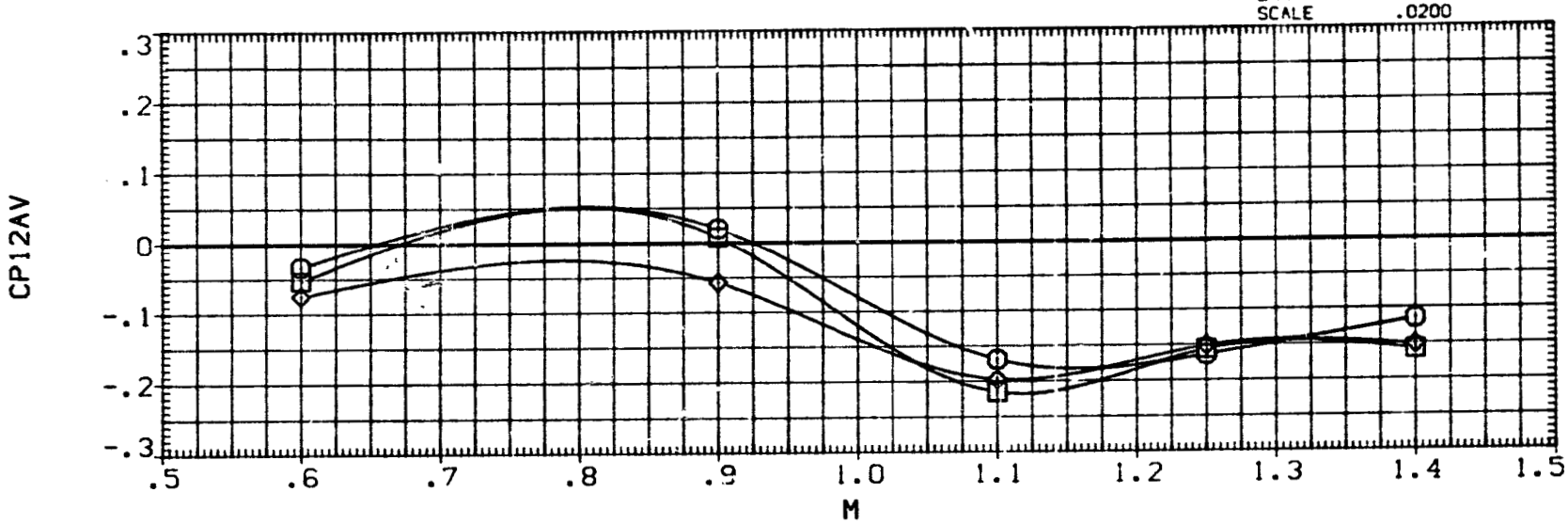

FIG. 127 ORB VENT PRESSURES

(BE4W28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | BE4W28 | .600 | BE4W29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | BE4W30 | 1.100 | BE4W31 | 1.250 |
| ◇ | 4.000 | | | | | BE4W32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



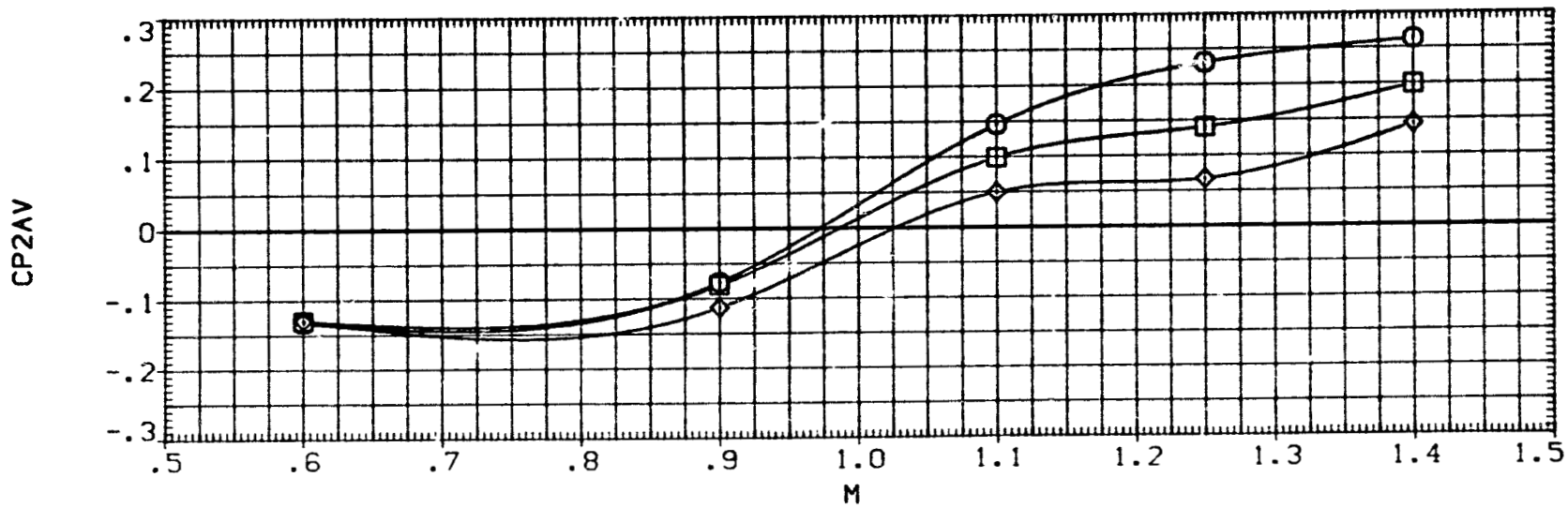



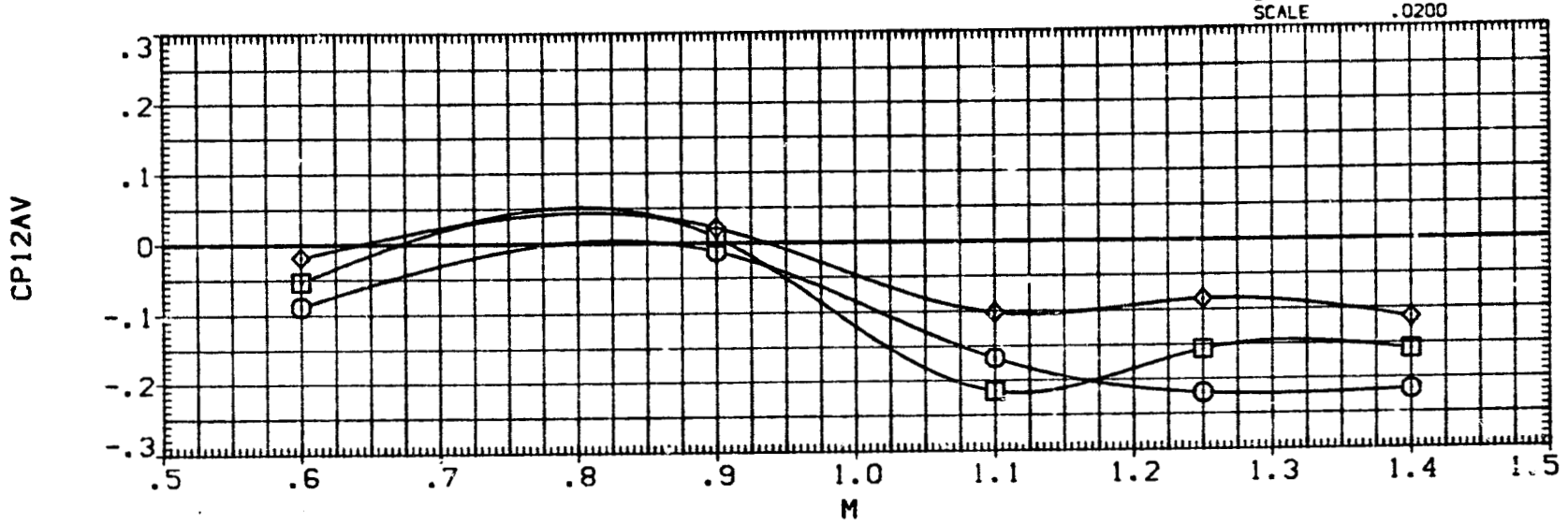

FIG. 128 AVERAGE ORB VENT PRESSURES

(BE4V28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ◇ | -4.000 | ALPHA | .000 | ELV-IB | .000 | BE4V28 | .600 | BE4V29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | BE4V30 | 1.100 | BE4V31 | 1.250 |
| | 4.000 | | | | | BE4V32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



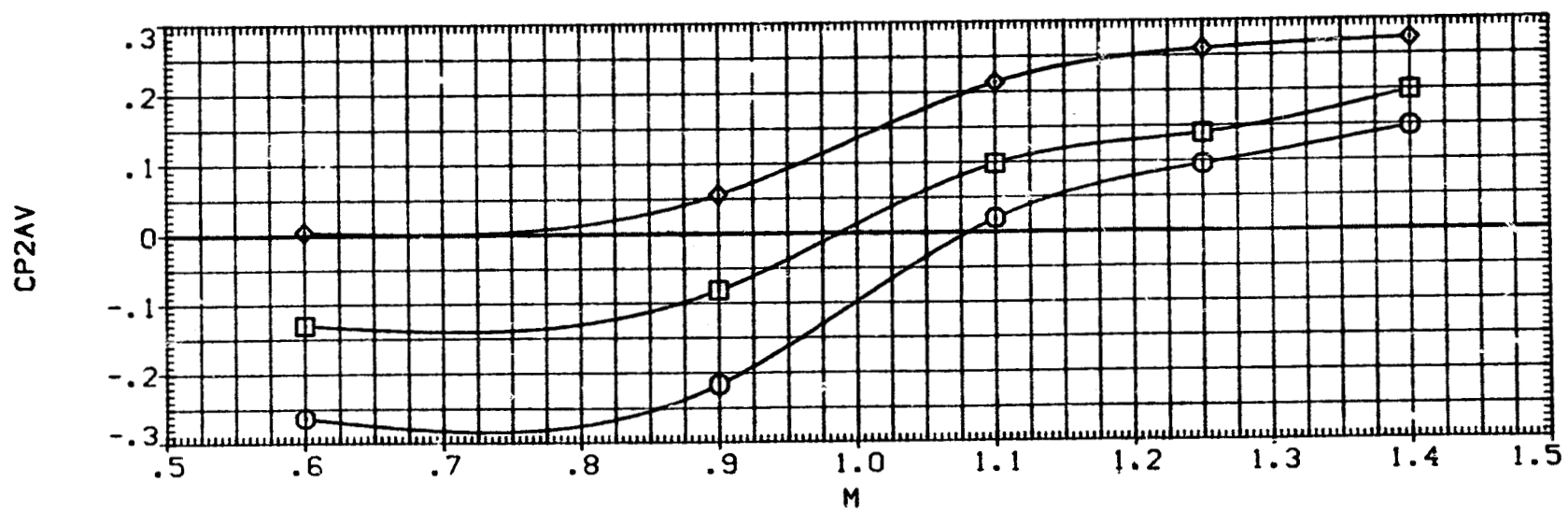




FIG. 128 AVERAGE ORB VENT PRESSURES

(IE4W28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | IE4W28 | .600 | IE4W29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | IE4W30 | 1.100 | IE4W31 | 1.250 |
| ◇ | 4.000 | | | | | IE4W32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

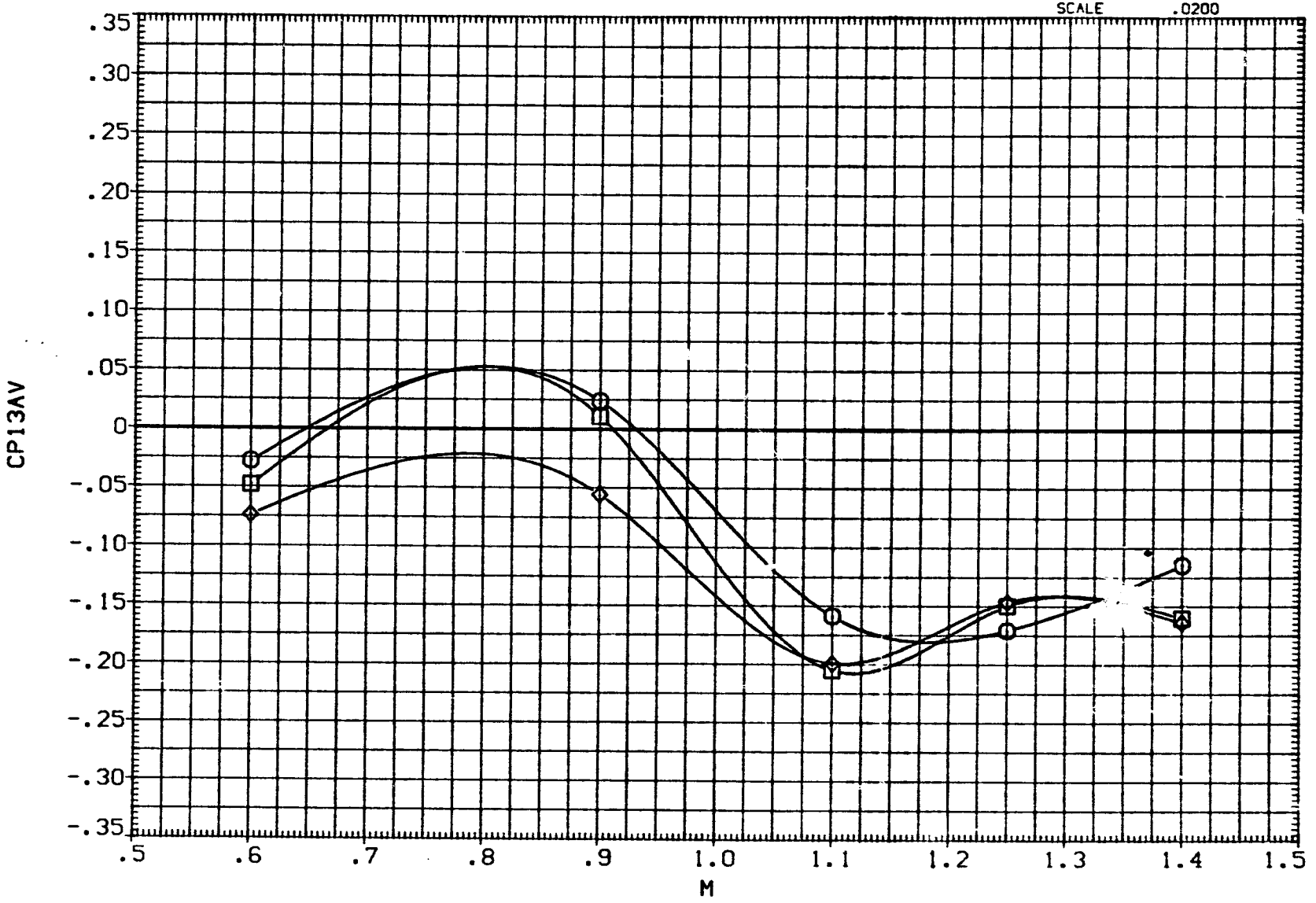



FIG. 128 AVERAGE ORB VENT PRESSURES

(IE4V28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-18 | .000 | IE4V28 | .600 | IE4V29 | .900 |
| □ | .000 | ELV-09 | .000 | RN/L | 3.400 | IE4V30 | 1.100 | IE4V31 | 1.250 |
| ◇ | 4.000 | | | | | IE4V32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

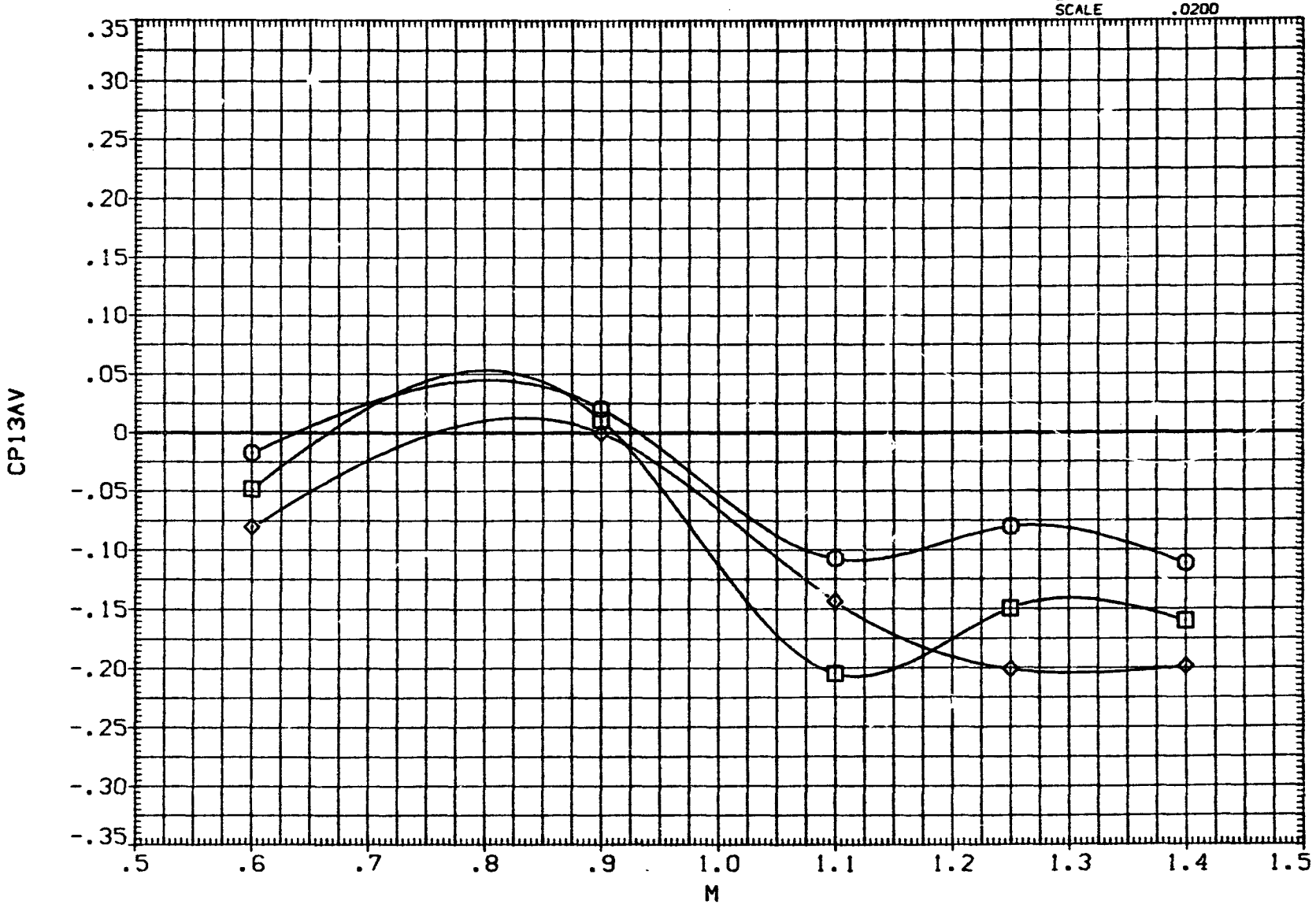


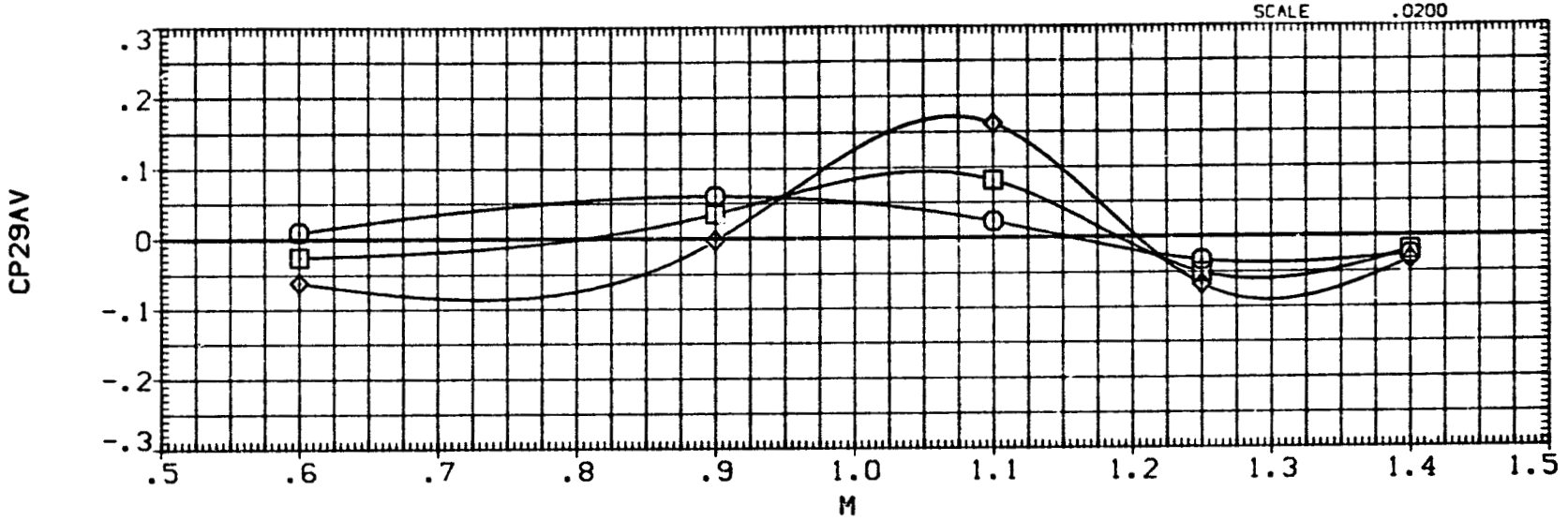

FIG. 128 AVERAGE ORB VENT PRESSURES

(CE4W28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | CE4W28 | .600 | CE4W29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | CE4W30 | 1.100 | CE4W31 | 1.250 |
| ◇ | 4.000 | | | | | CE4W32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



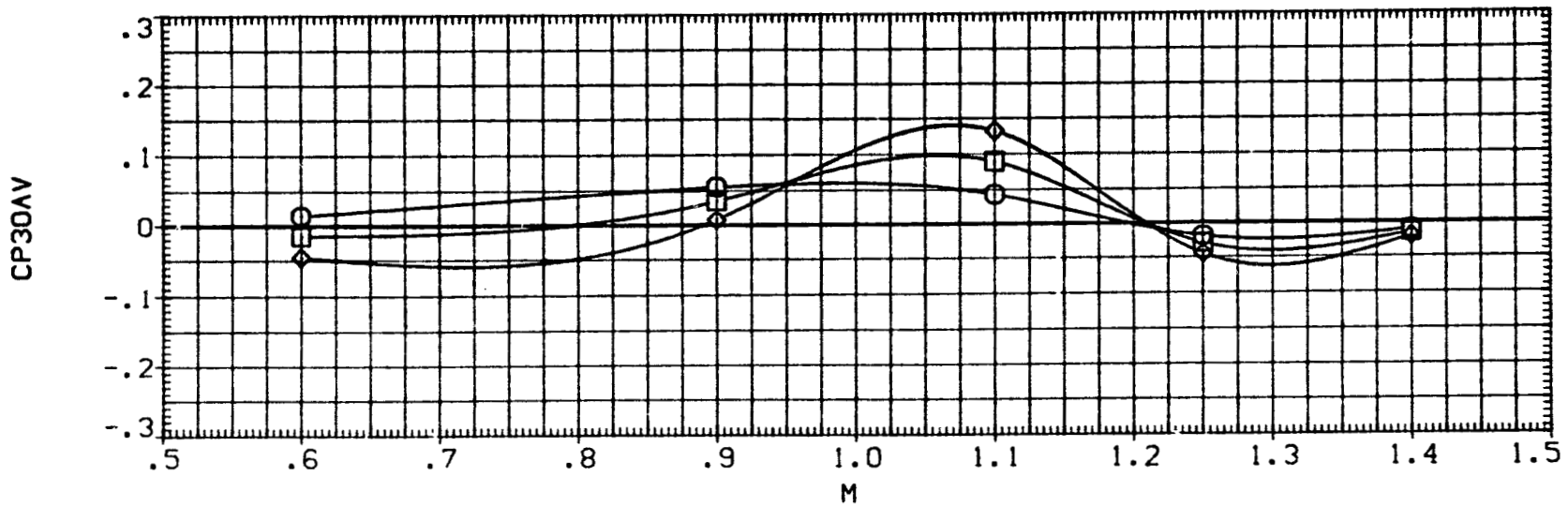




FIG. 128 AVERAGE ORB VENT PRESSURES

(CE4V28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | CE4V28 | .600 | CE4V29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | CE4V30 | 1.100 | CE4V31 | 1.250 |
| ◇ | 4.000 | | | | | CE4V32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

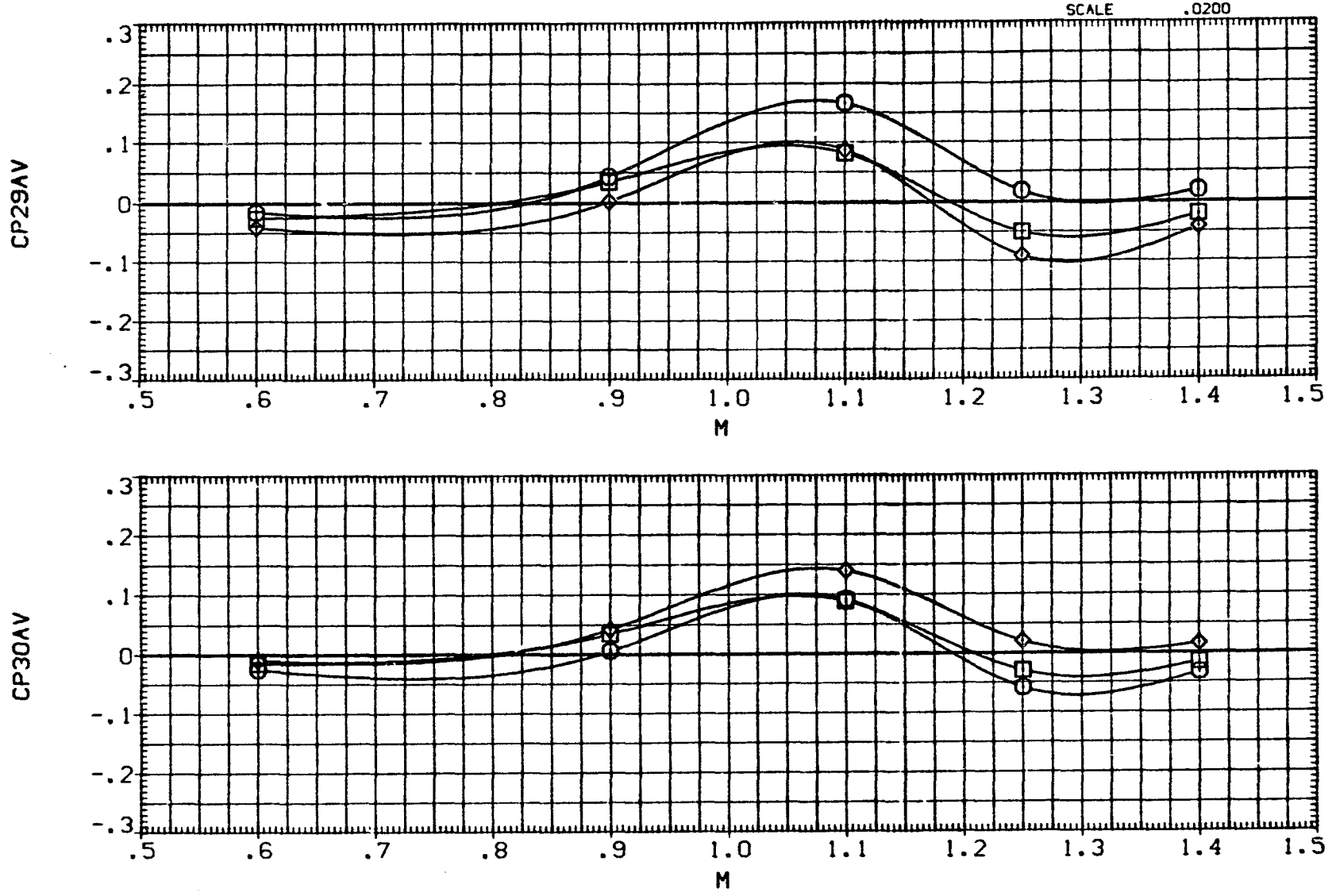



FIG. 128 AVERAGE ORB VENT PRESSURES

(HE4W28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA |
|---|---|
| ○ | -4.000 |
| □ | .000 |
| ◇ | 4.000 |

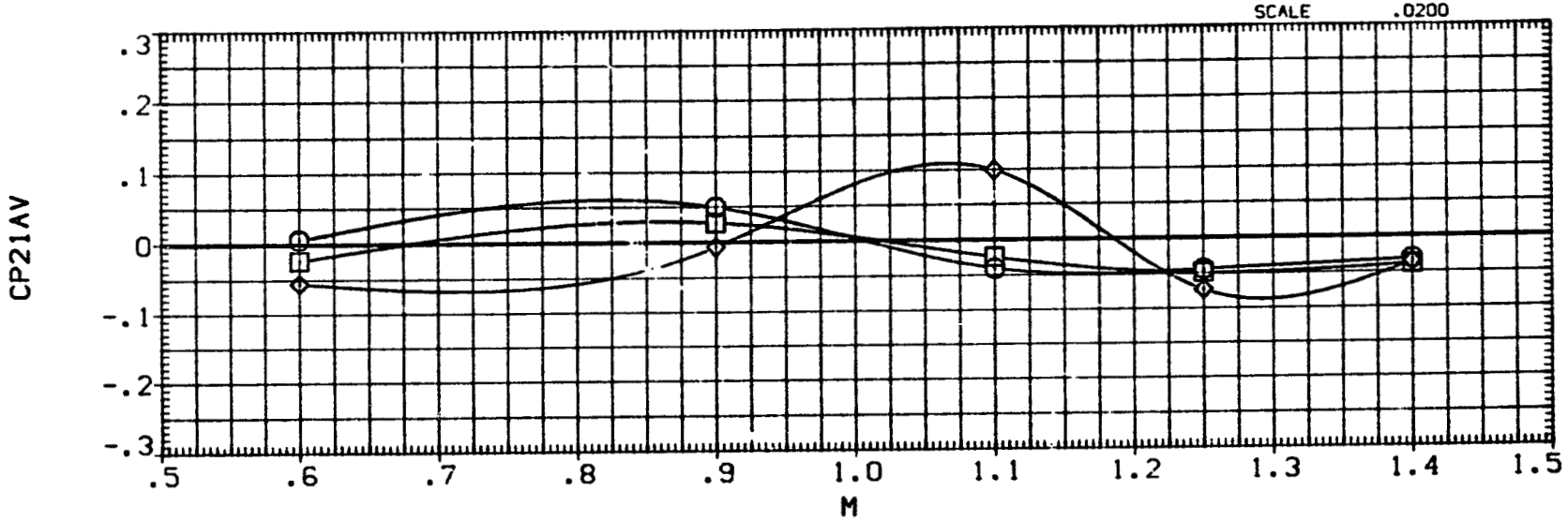
PARAMETRIC VALUES

| | | | | |
|---|---|---|---|---|
| BETA | .000 | ELV-IB | .000 | |
| ELV-OB | .000 | RN/L | 3.400 | |

| DATASET | MACH | DATASET | MACH |
|---|---|---|---|
| HE4W28 | .600 | HE4W29 | .900 |
| HE4W30 | 1.100 | HE4W31 | 1.250 |
| HE4W32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



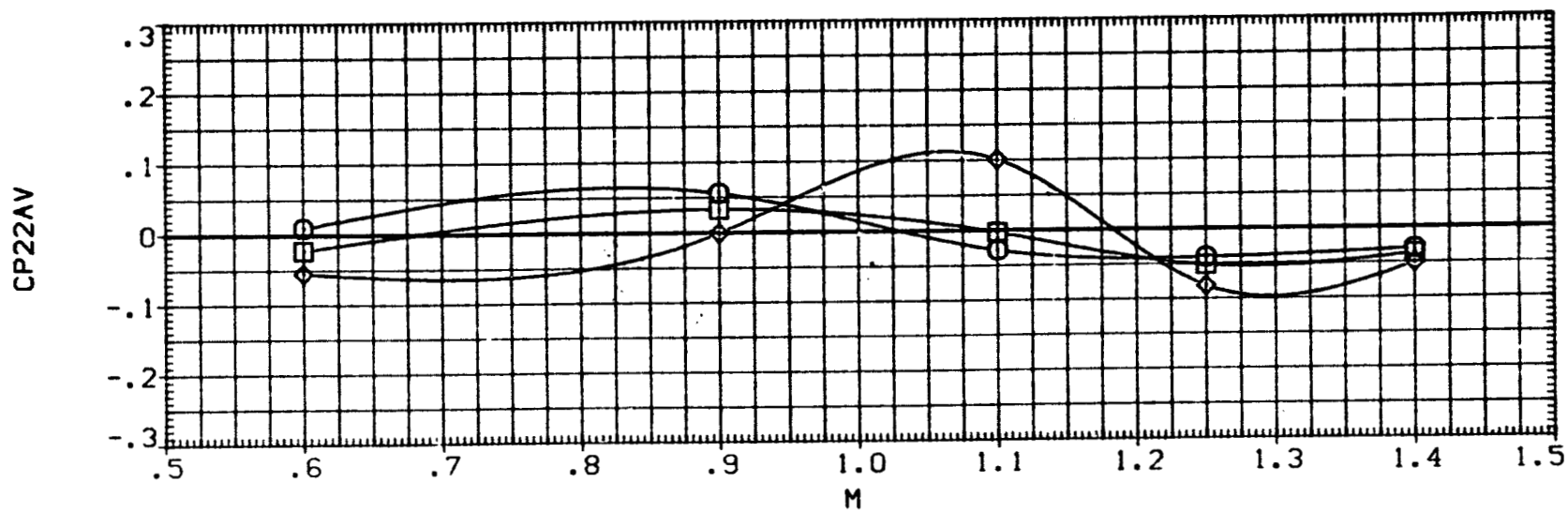



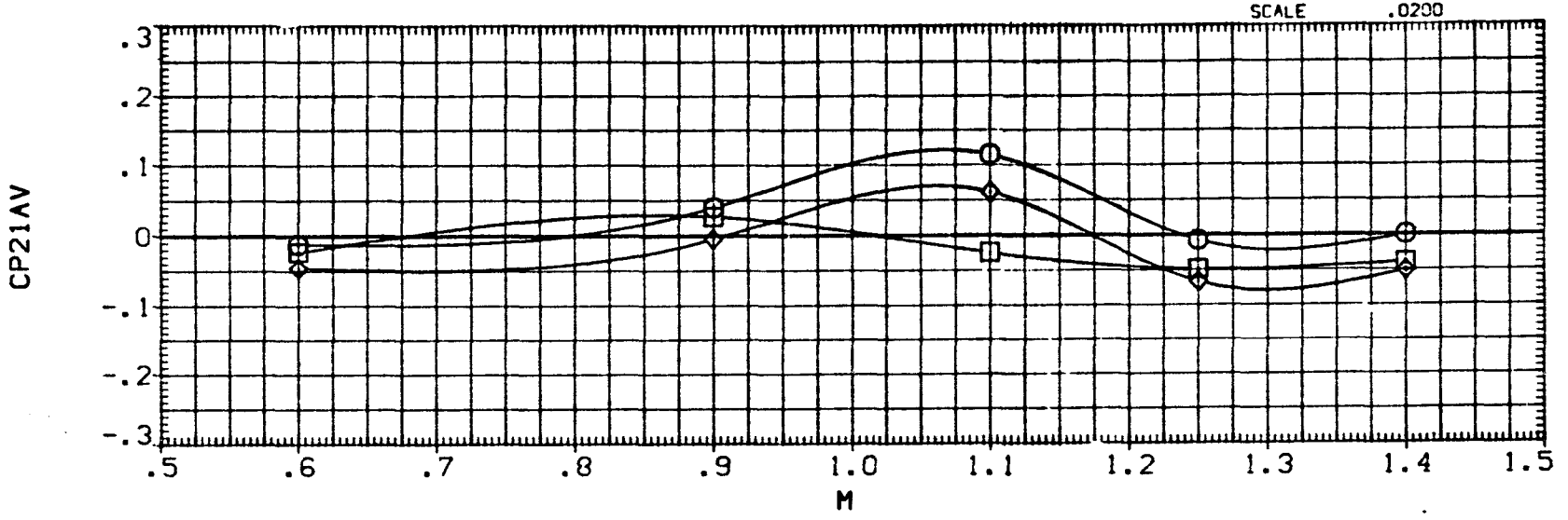

FIG. 128 AVERAGE ORB VENT PRESSURES

(HE4V28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | HE4V28 | .600 | HE4V29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | HE4V30 | 1.100 | HE4V31 | 1.250 |
| ◇ | 4.000 | | | | | HE4V32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



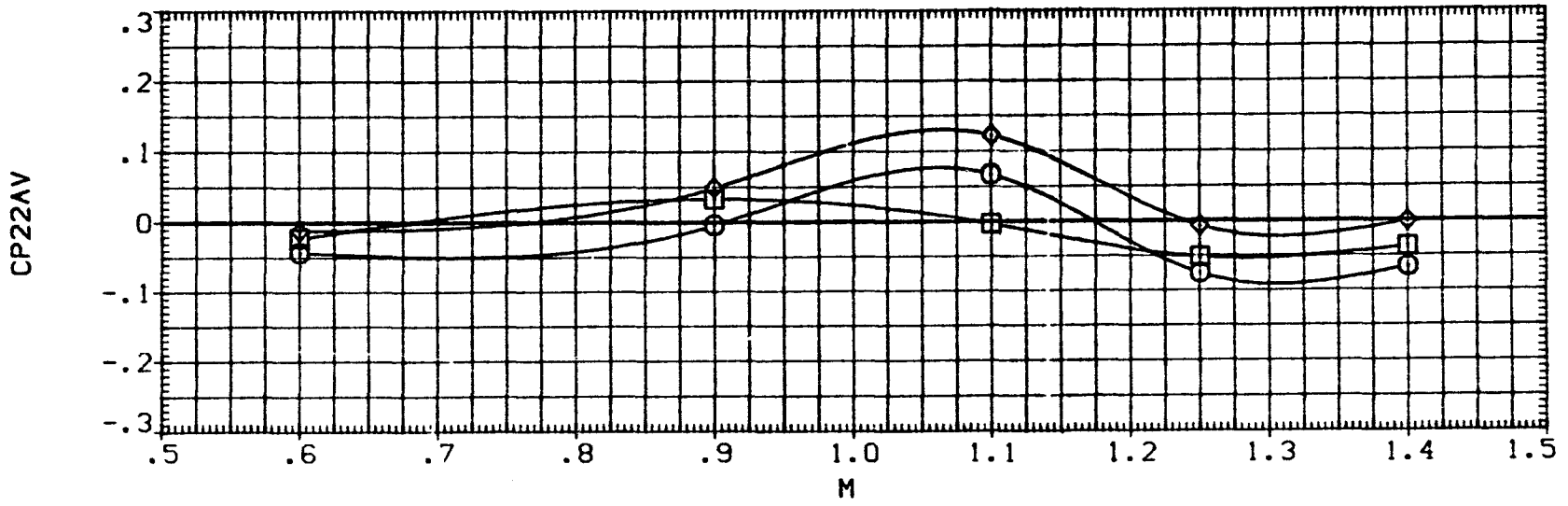



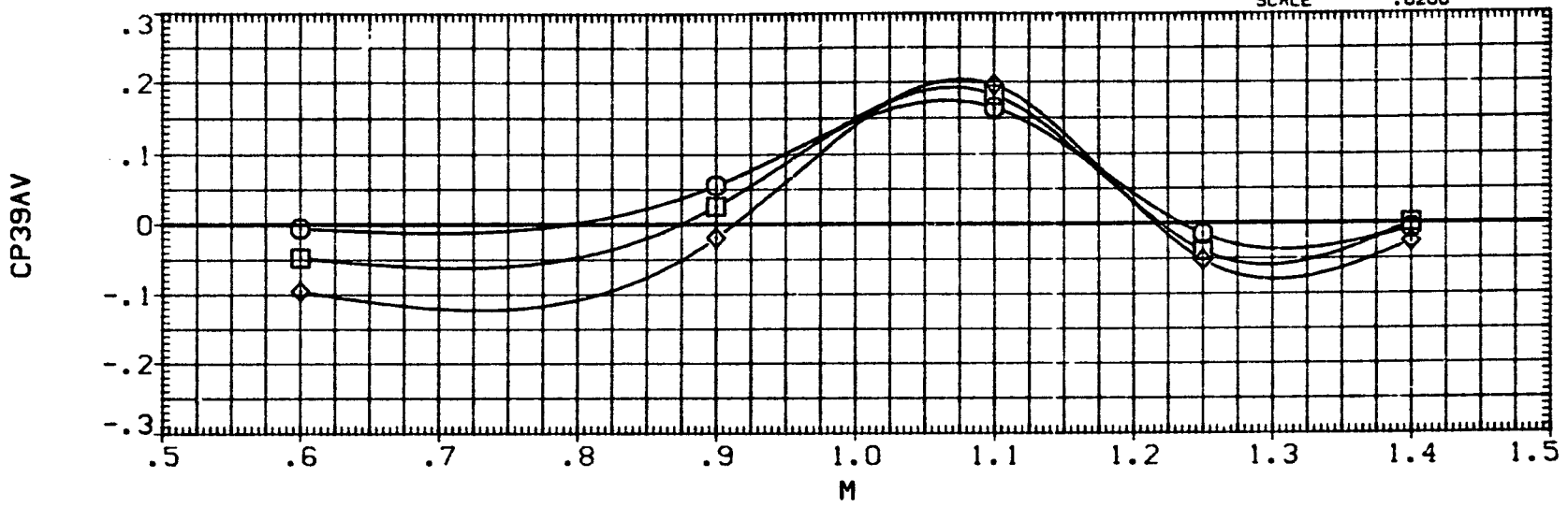

FIG. 128 AVERAGE ORB VENT PRESSURES

(JE4W28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | JE4W28 | .600 | JE4W29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | JE4W30 | 1.100 | JE4W31 | 1.250 |
| ◇ | 4.000 | | | | | JE4W32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



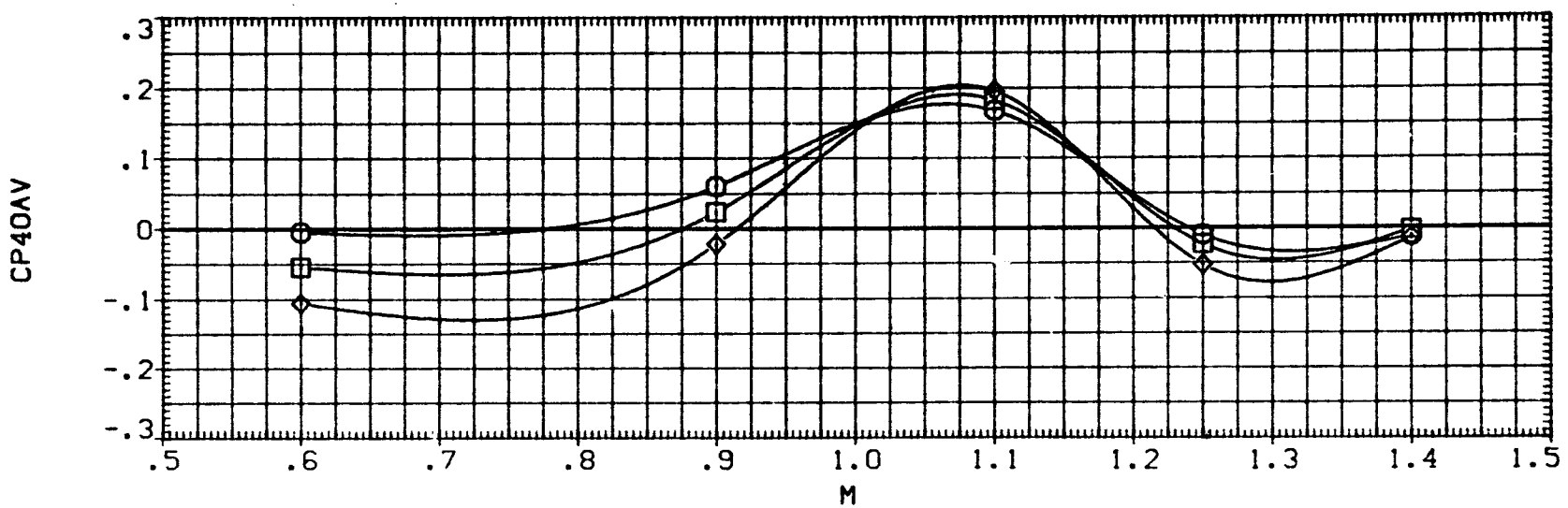




FIG. 128 AVERAGE ORB VENT PRESSURES

(JE4V28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ◇□○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | JE4V28 | .600 | JE4V29 | .900 |
| | .000 | ELV-OB | .000 | RN/L | 3.400 | JE4V30 | 1.100 | JE4V31 | 1.250 |
| | 4.000 | | | | | JE4V32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

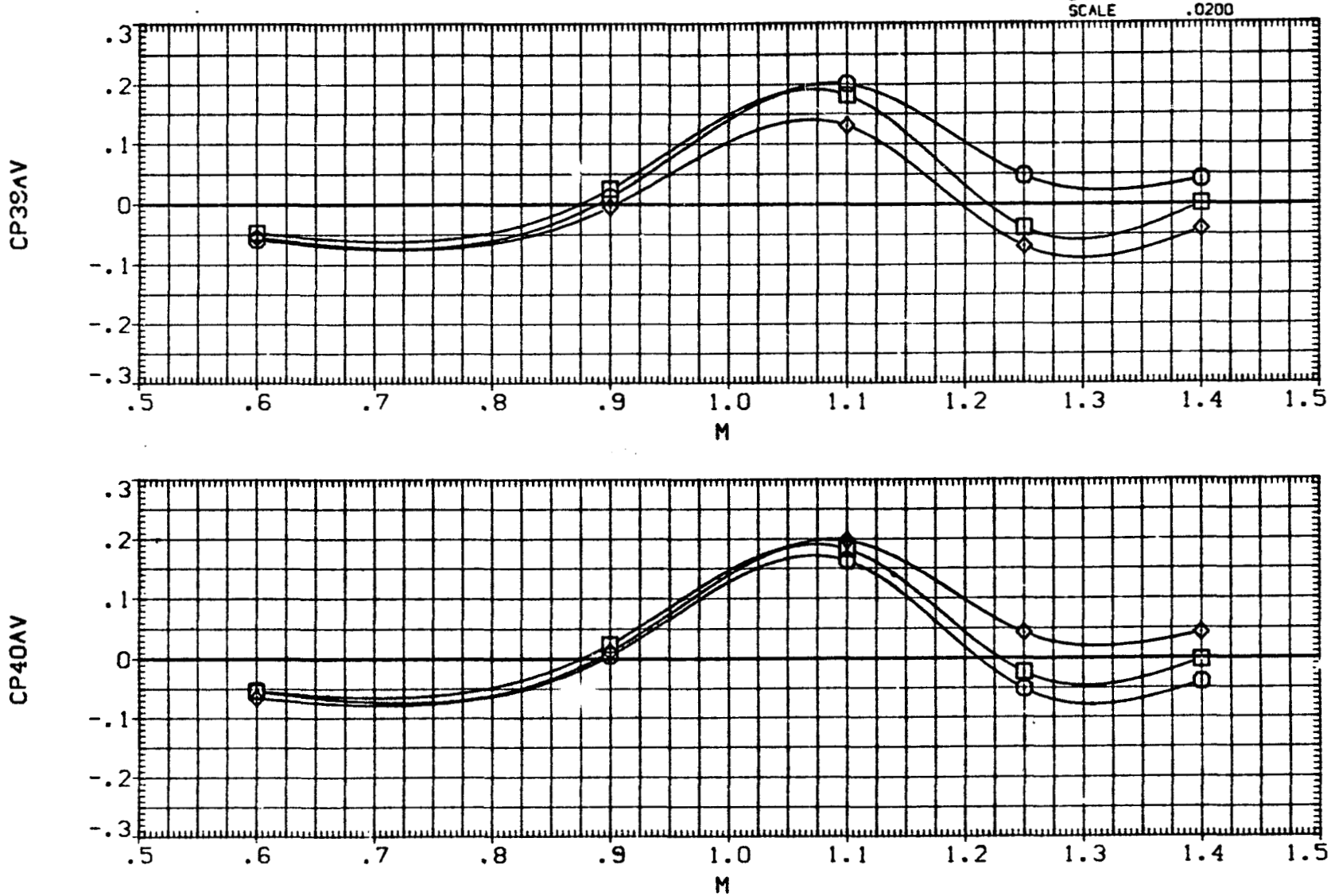


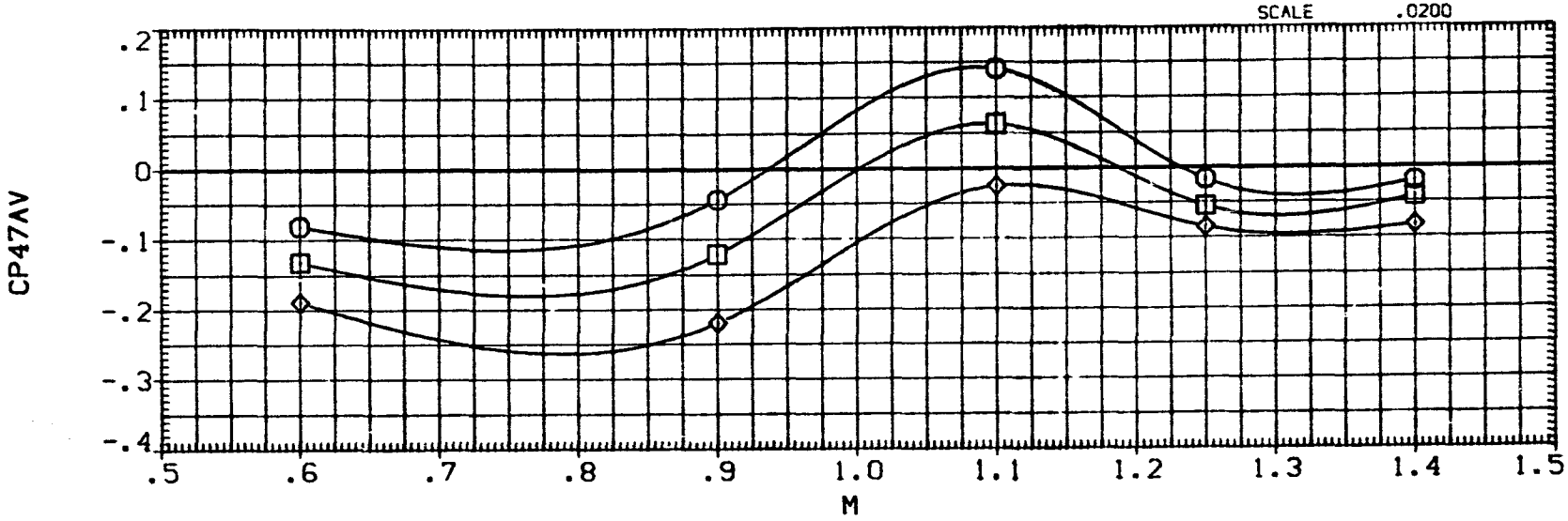

FIG. 128 AVERAGE ORB VENT PRESSURES

(KE4W28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | KE4W28 | .600 | KE4W29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | KE4W30 | 1.100 | KE4W31 | 1.250 |
| ◇ | 4.000 | | | | | KE4W32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



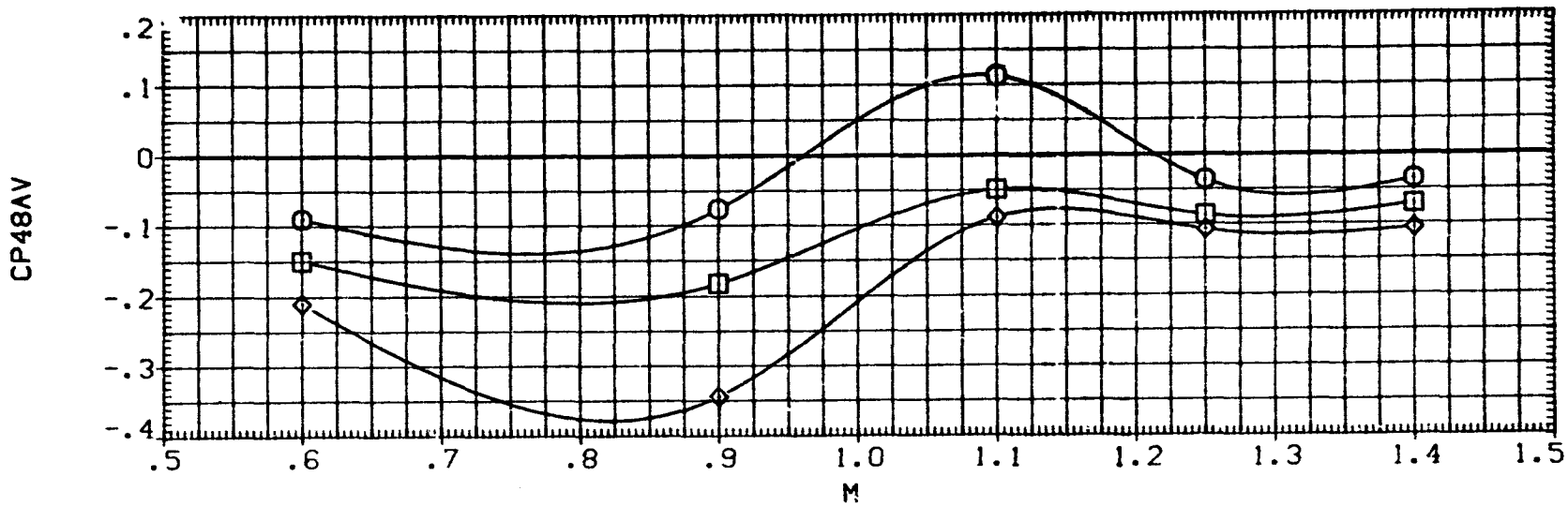




FIG. 128 AVERAGE ORB VENT PRESSURES

(KE4V28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | KE4V28 | .600 | KE4V29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | KE4V30 | 1.100 | KE4V31 | 1.250 |
| ◇ | 4.000 | | | | | KE4V32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

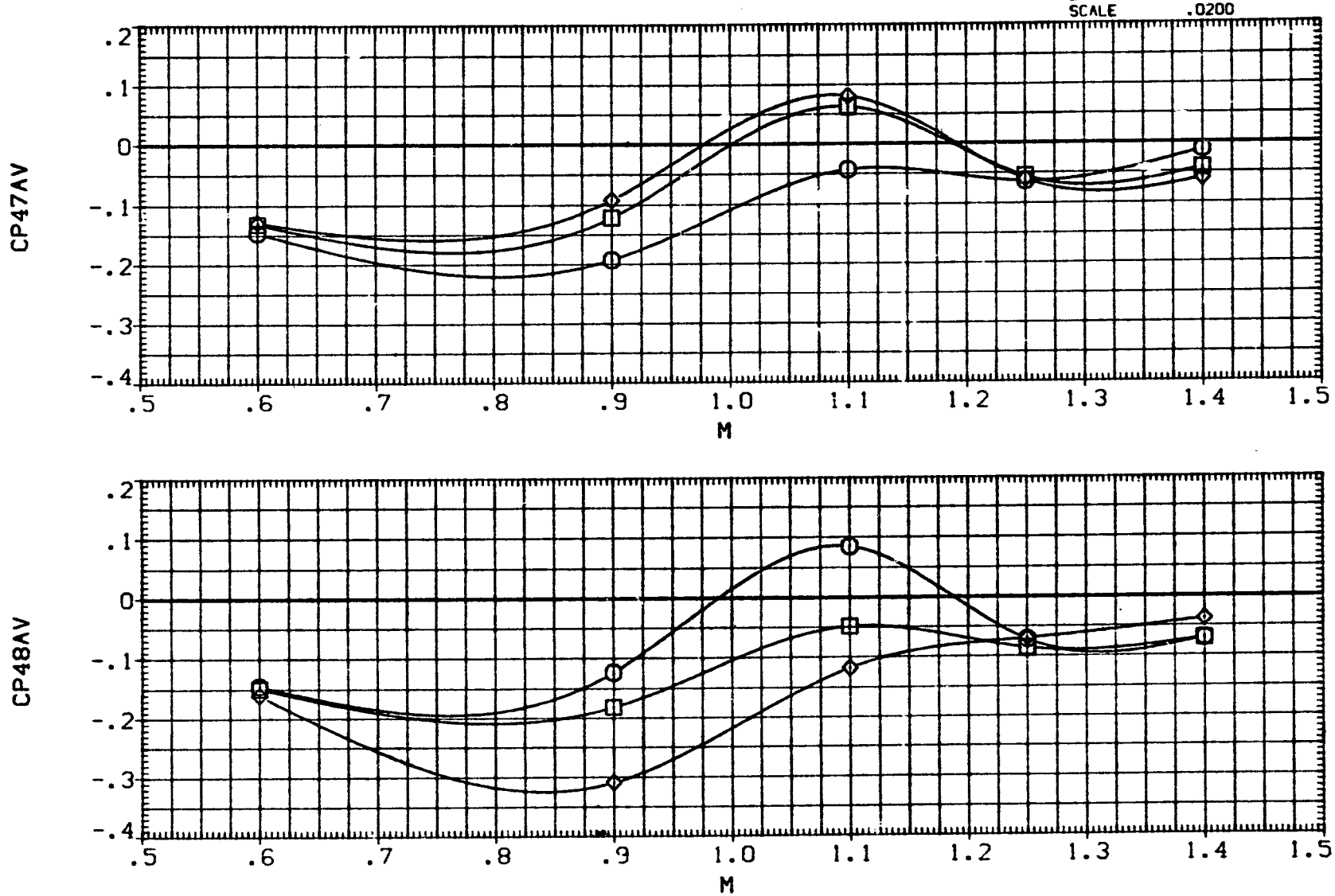


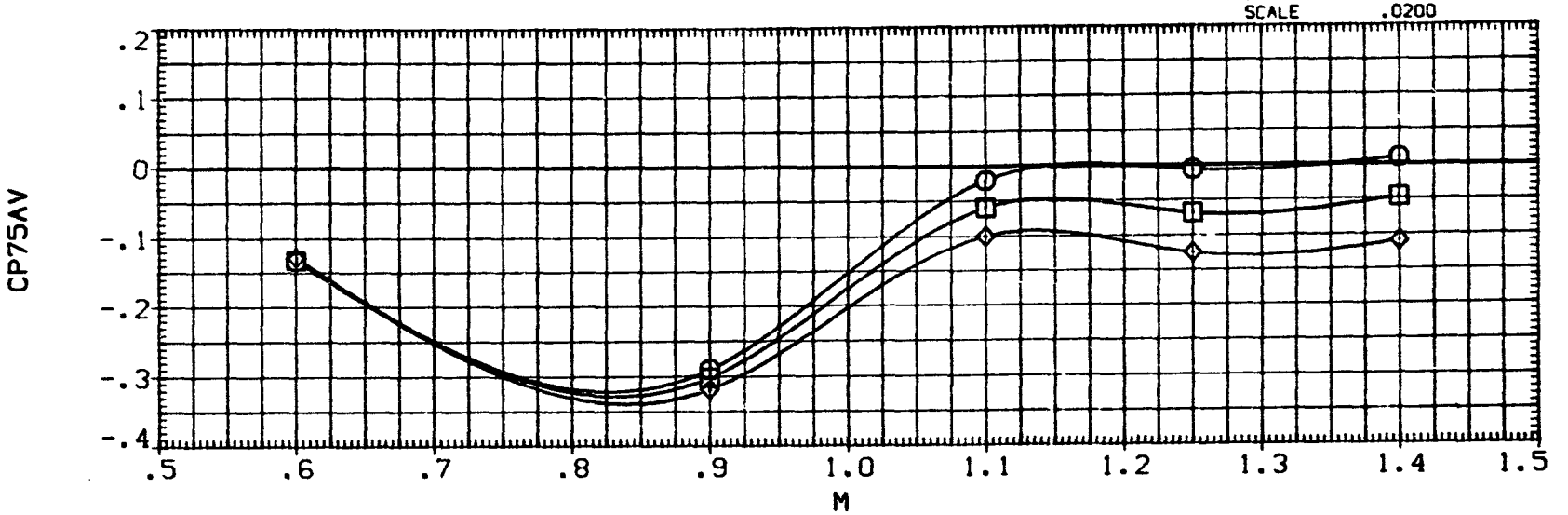

FIG. 128 AVERAGE ORB VENT PRESSURES

(DE4W28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ◇ | -4.000 | BETA | .000 | ELV-IB | .000 | DE4W28 | .600 | DE4W29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | DE4W30 | 1.100 | DE4W31 | 1.250 |
| ○ | 4.000 | | | | | DE4W32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



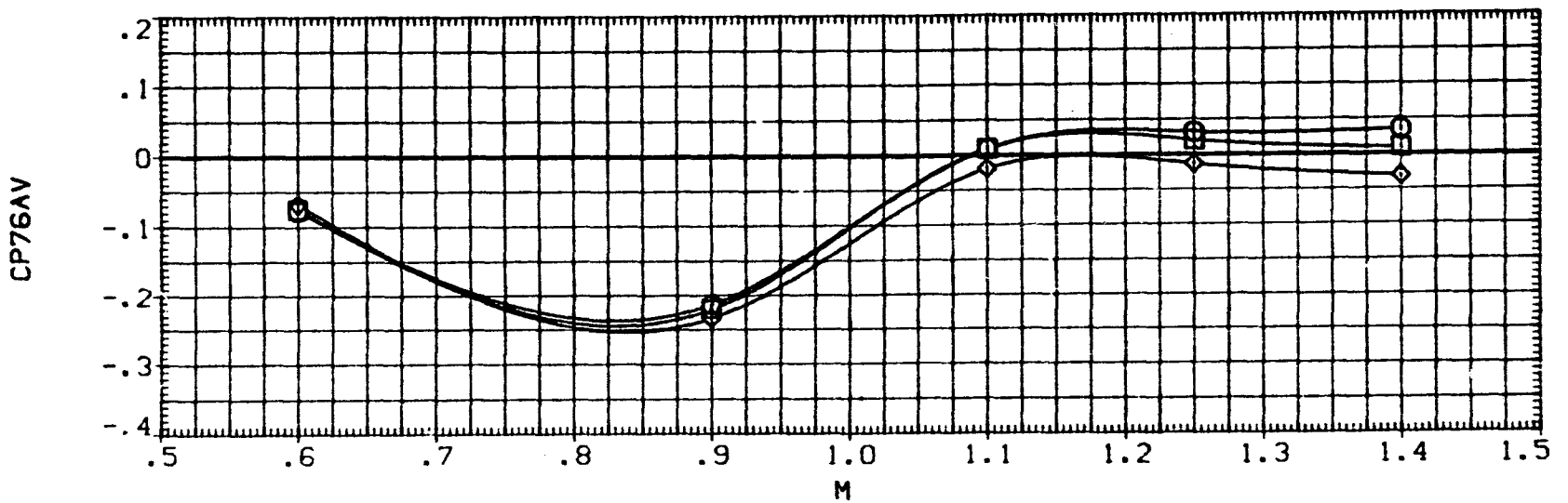



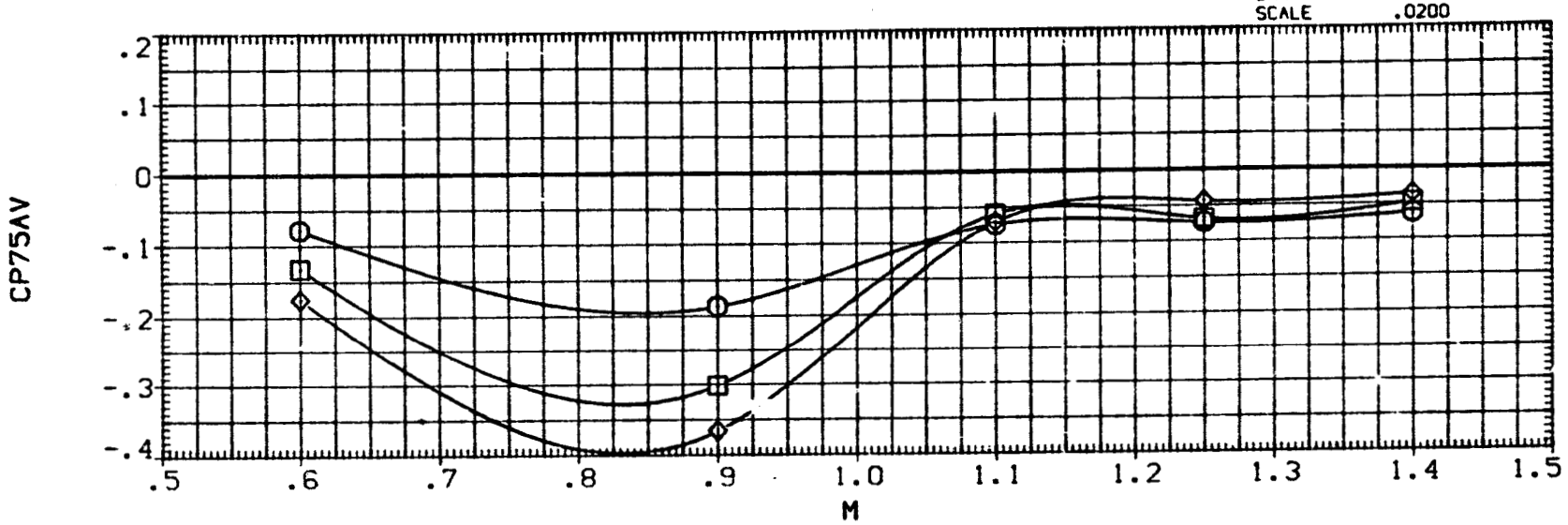

FIG. 128 AVERAGE ORB VENT PRESSURES

(DE4V28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | DE4V28 | .600 | DE4V29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | DE4V30 | 1.100 | DE4V31 | 1.250 |
| ◇ | 4.000 | | | | | DE4V32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



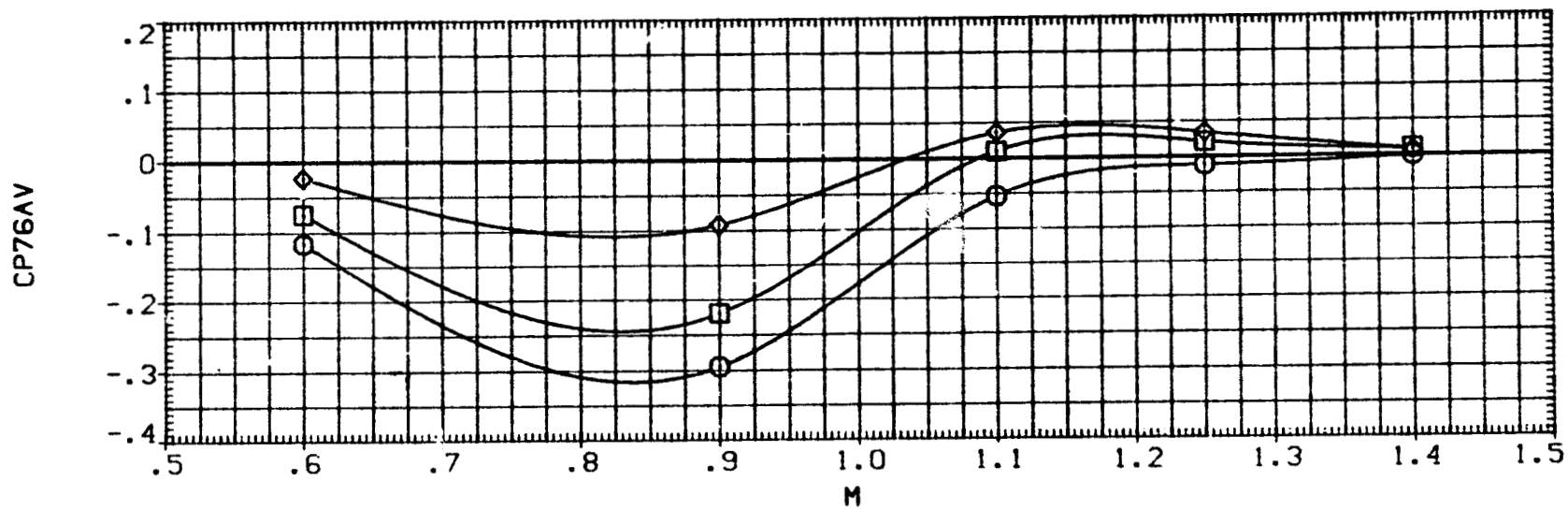



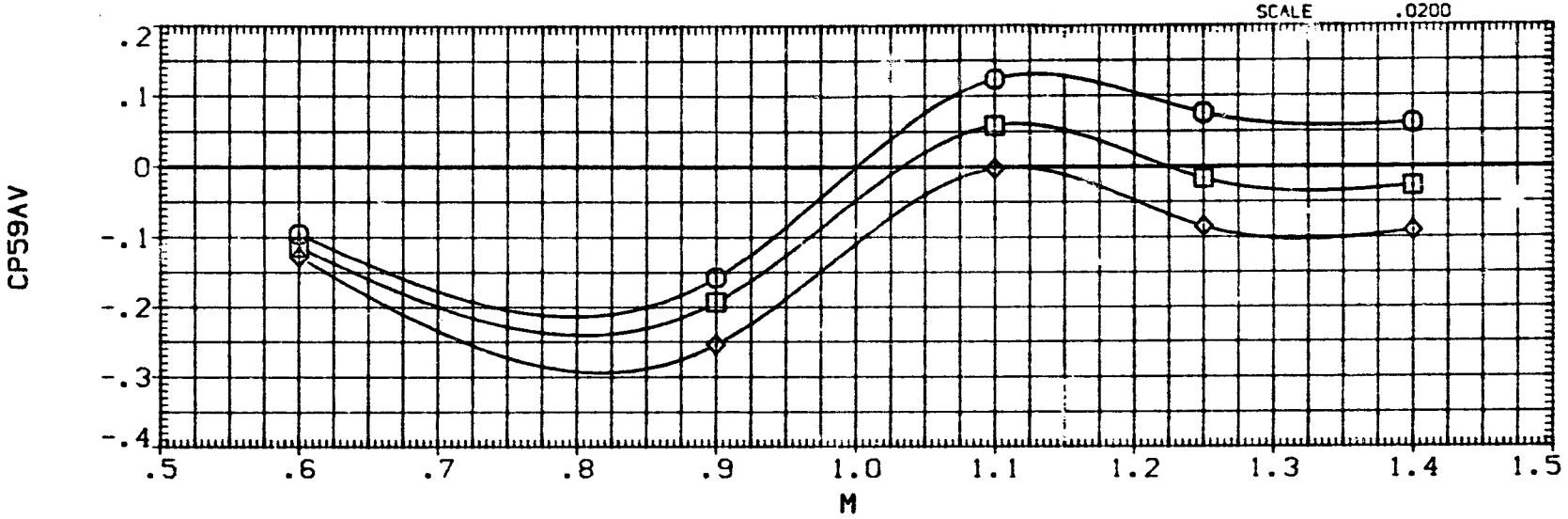

FIG. 128 AVERAGE ORB VENT PRESSURES

(LE4W28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | LE4W28 | .600 | LE4W29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | LE4W30 | 1.100 | LE4W31 | 1.250 |
| ◇ | 4.000 | | | | | LE4W32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



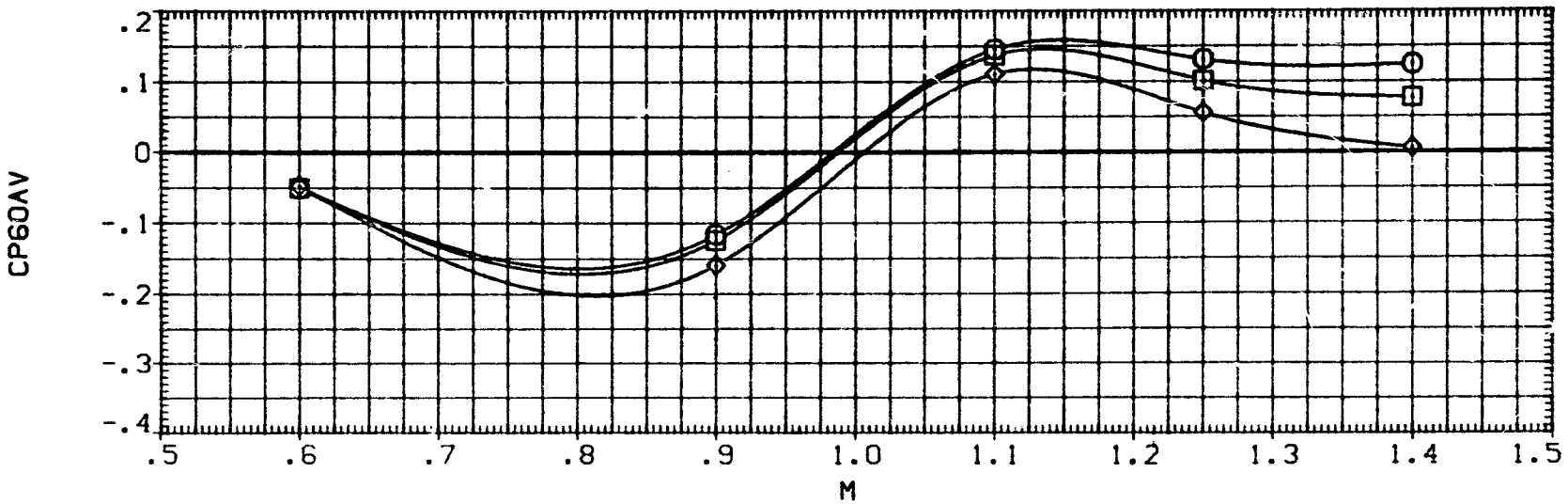




FIG. 128 AVERAGE ORB VENT PRESSURES

(LE4V28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| □ | -4.000 | ALPHA | .000 | ELV-IB | .000 | LE4V28 | .600 | LE4V29 | .900 |
| ◇□ | .000 | ELV-OB | .000 | RN/L | 3.400 | LE4V30 | 1.100 | LE4V31 | 1.250 |
| ◇ | 4.000 | | | | | LE4V32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

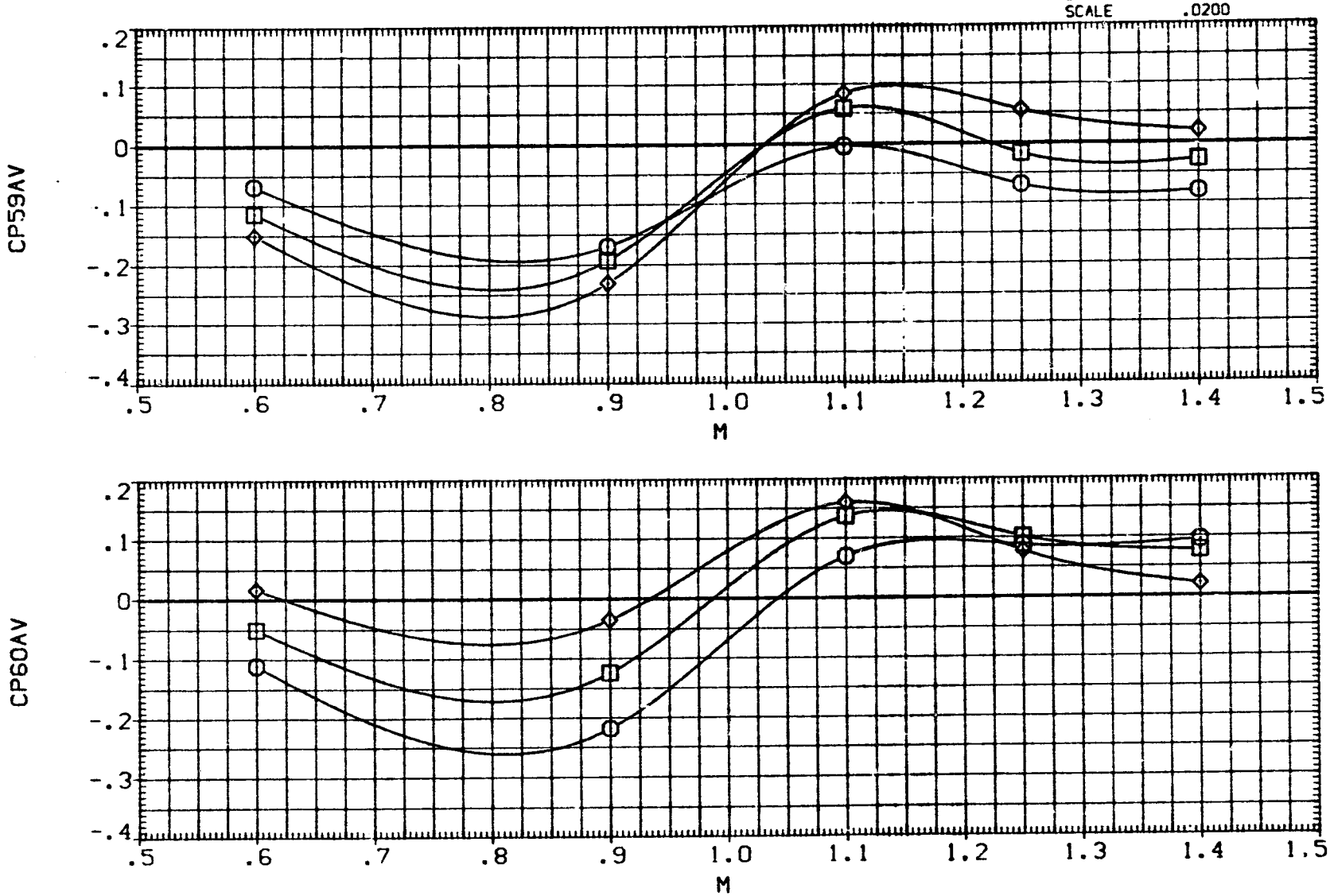


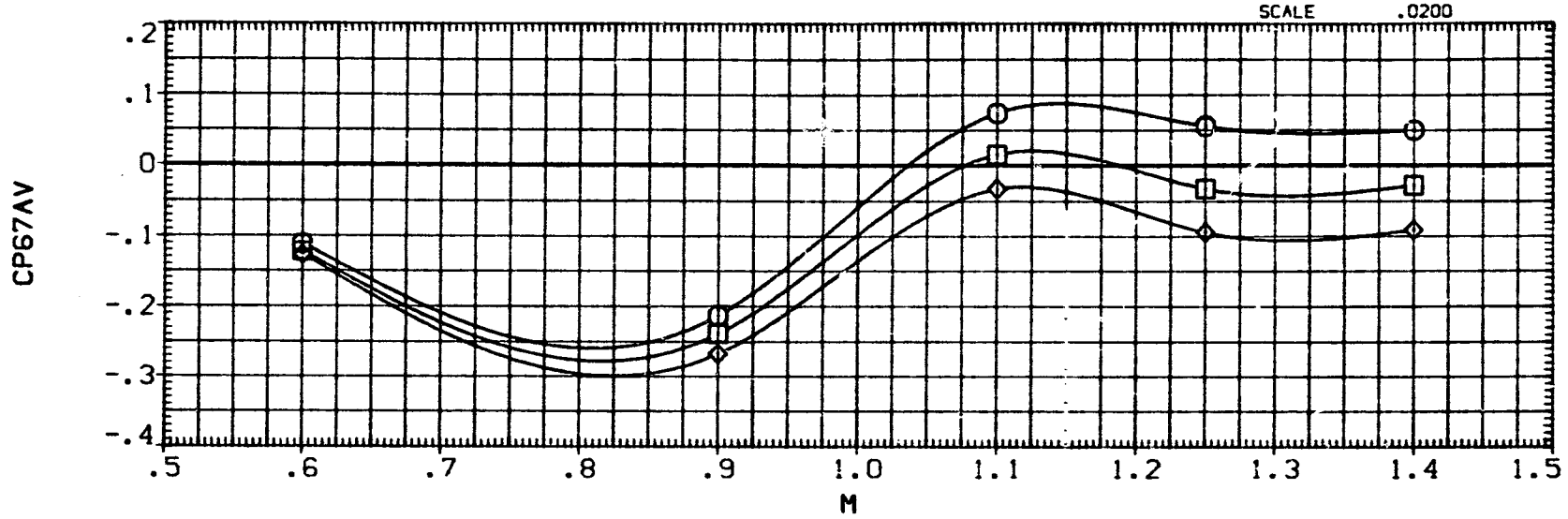

FIG. 128 AVERAGE ORB VENT PRESSURES

(ME4W28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | ALPHA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | ME4W28 | .600 | ME4W29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | ME4W30 | 1.100 | ME4W31 | 1.250 |
| ◇ | 4.000 | | | | | ME4W32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



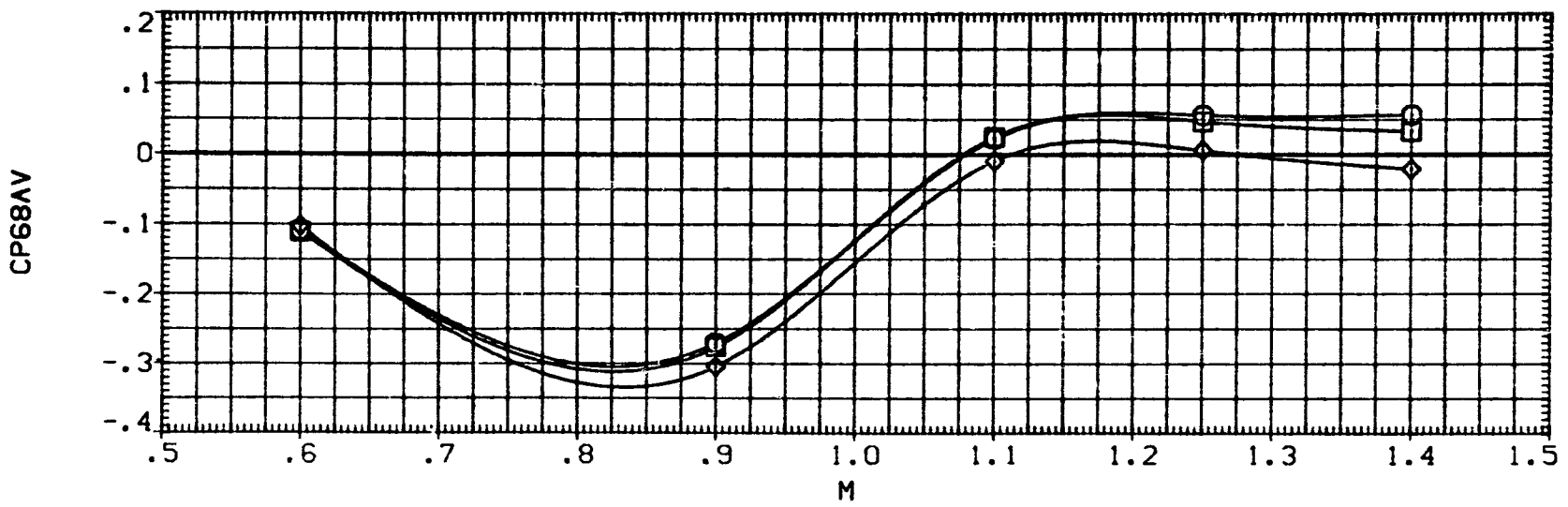



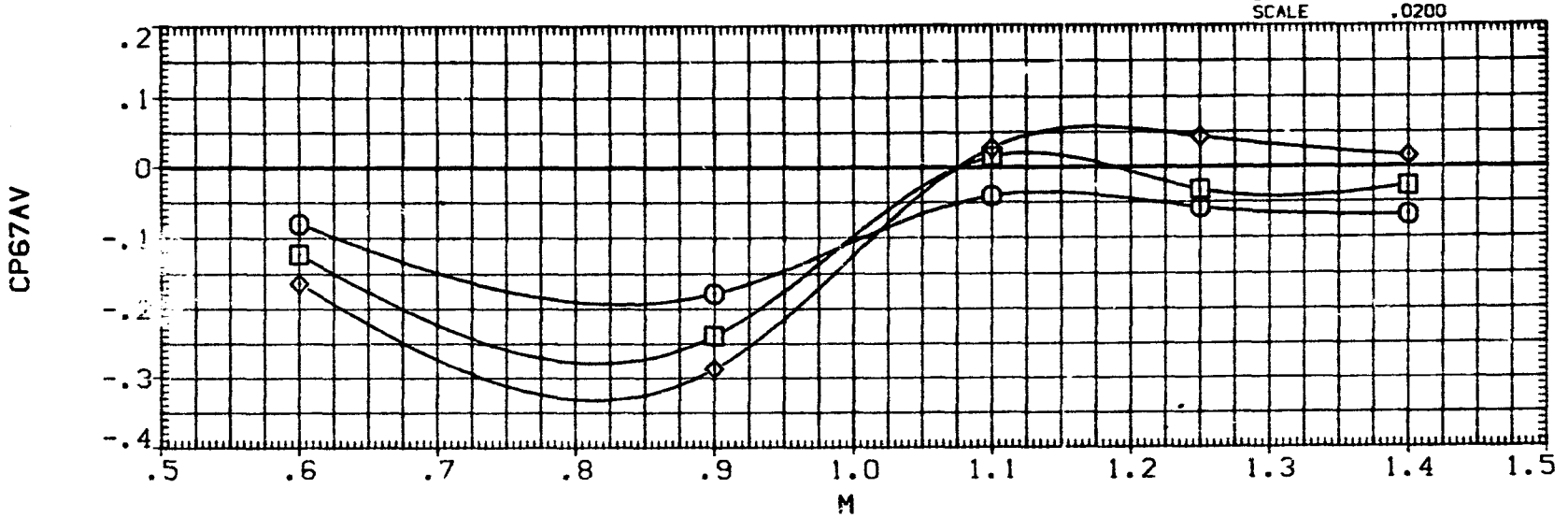

FIG. 128 AVERAGE ORB VENT PRESSURES

(ME4V28) ARC 11-023 IA80 OTS (SRB OFF ) (SSME OFF )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | ME4V28 | .600 | ME4V29 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | ME4V30 | 1.100 | ME4V31 | 1.250 |
| ◇ | 4.000 | | | | | ME4V32 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



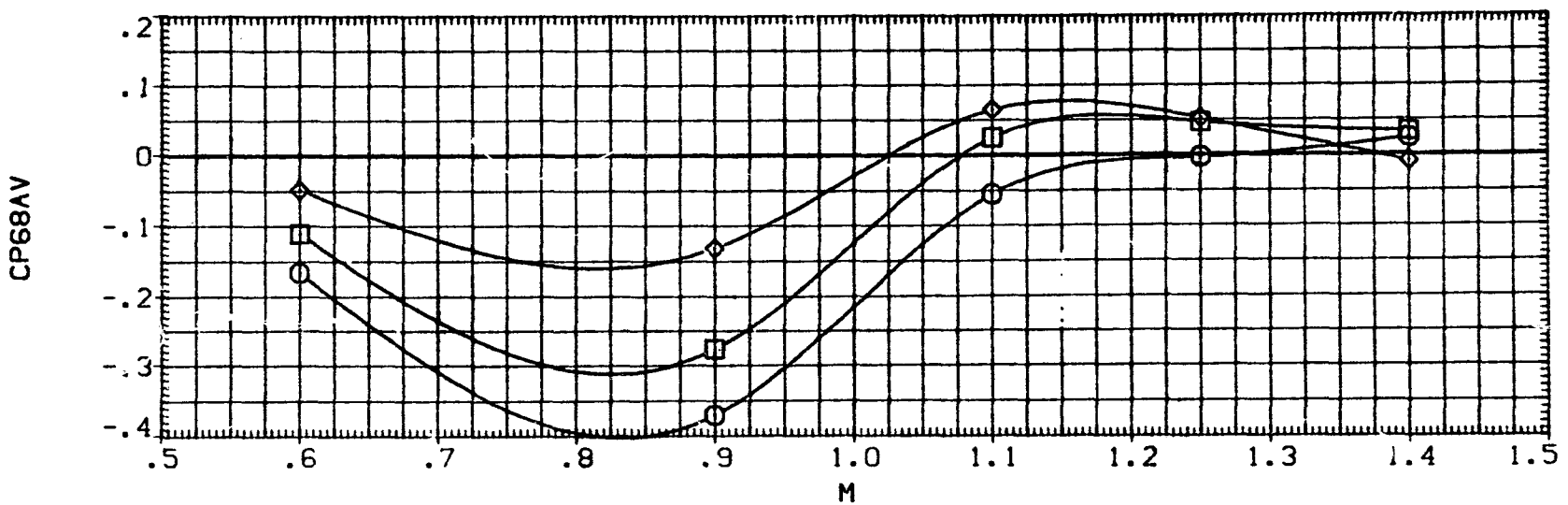




FIG. 128 AVERAGE ORB VENT PRESSURES

(BE4Q20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | ALPHA |
|---|---|
| ◇ | 4.000 |
| □ | .000 |
| ○ | -4.000 |

PARAMETRIC VALUES

| | | | | | |
|---|---|---|---|---|---|
| BETA | .000 | ELV-IB | .000 | | |
| ELV-OB | .000 | RN/L | 3.400 | | |

| DATASET | MACH |
|---|---|
| BE4Q20 | .600 |
| BE4Q22 | 1.100 |
| BE4Q24 | 1.400 |

| DATASET | MACH |
|---|---|
| BE4Q21 | .900 |
| BE4Q23 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

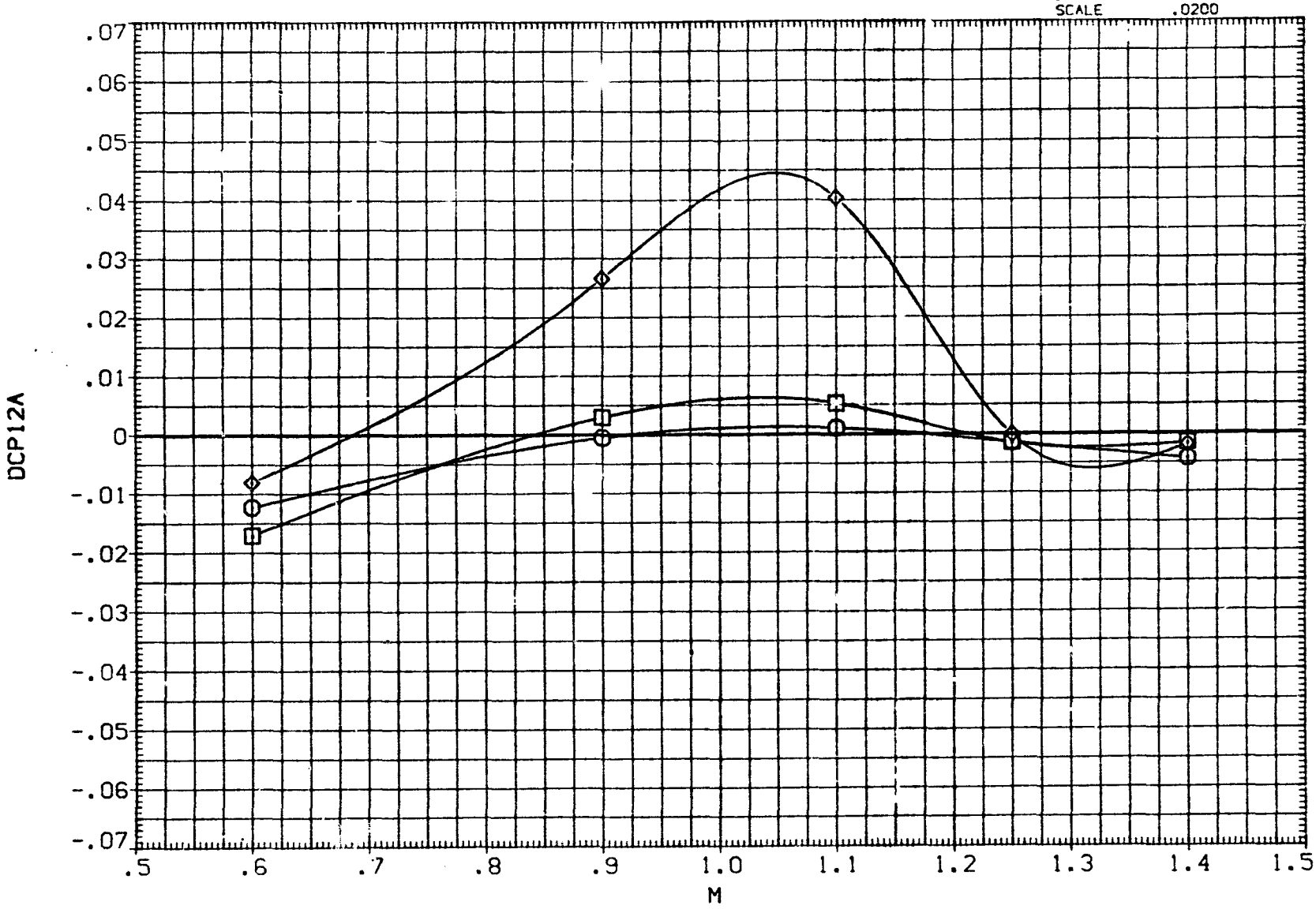



FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(BE4P20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | BETA | | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | ALPHA | .000 | ELV-IB | .000 | BE4P20 | .600 | BE4P21 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | BE4P22 | 1.100 | BE4P23 | 1.250 |
| ◇ | 4.000 | | | | | BE4P24 | 1.400 | | |

PARAMETRIC VALUES

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

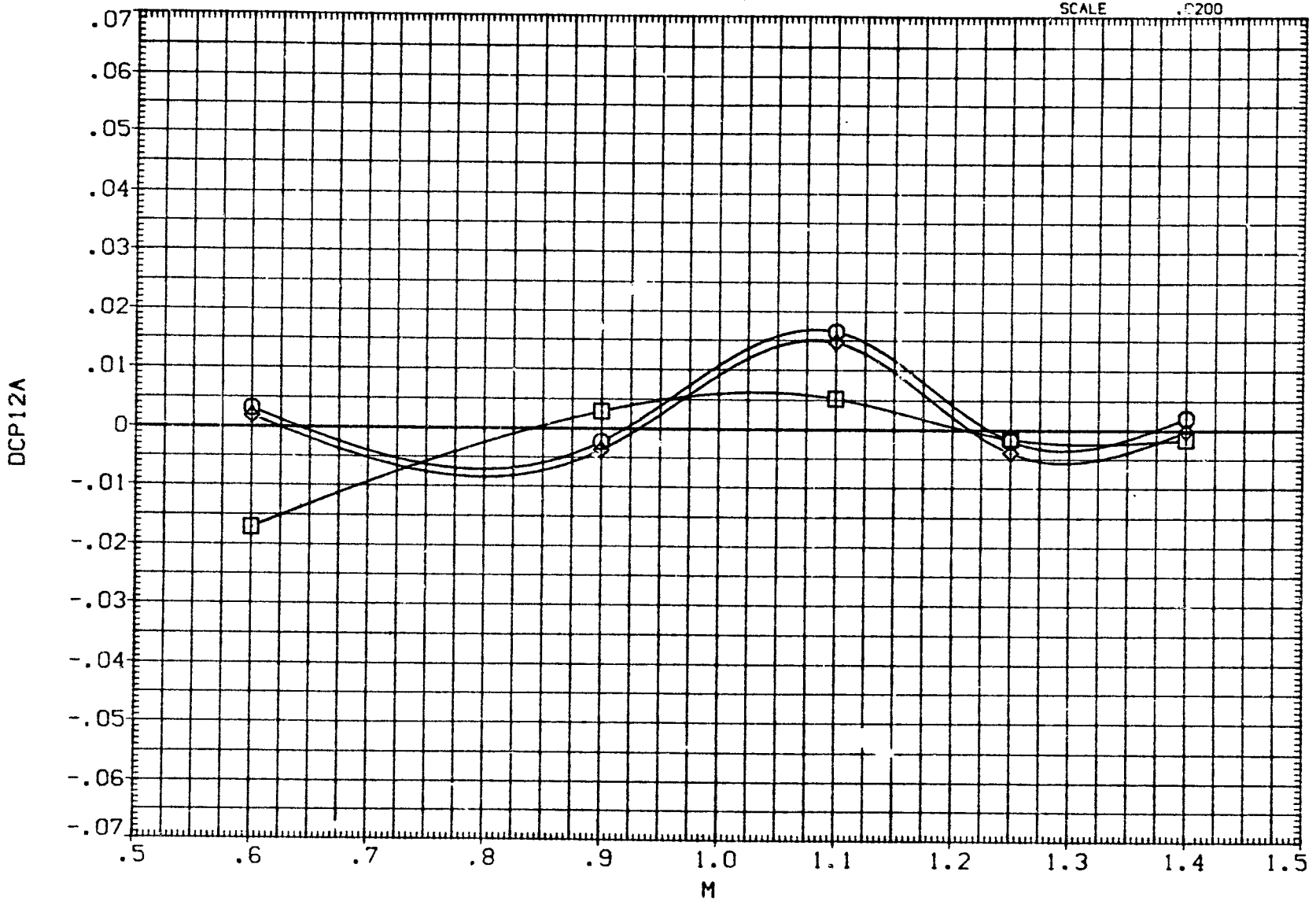



FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(IE4020) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ◇ | -4.000 | BETA | .000 | ELV-IB | .000 | IE4020 | .600 | IE4021 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | IE4022 | 1.100 | IE4023 | 1.250 |
| ○ | 4.000 | | | | | IE4024 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

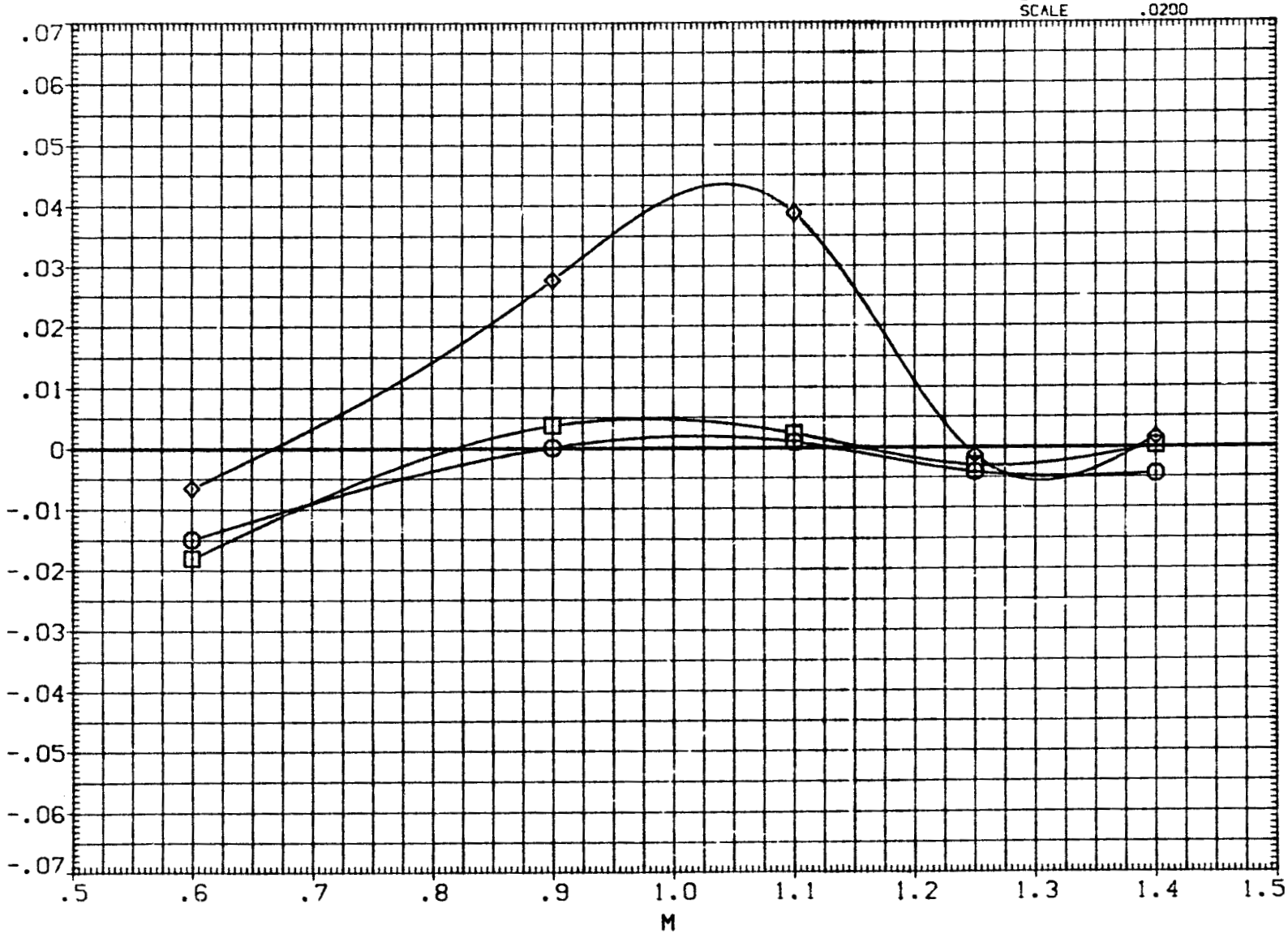



FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(IE4P20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | BETA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| □ | -4.000 | ALPHA | .000 | ELV-IB | .000 | IE4P20 | .600 | IE4P21 | .900 |
| ◇□ | .000 | ELV-OB | .000 | RN/L | 3.400 | IE4P22 | 1.100 | IE4P23 | 1.250 |
| ◇ | 4.000 | | | | | IE4P24 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

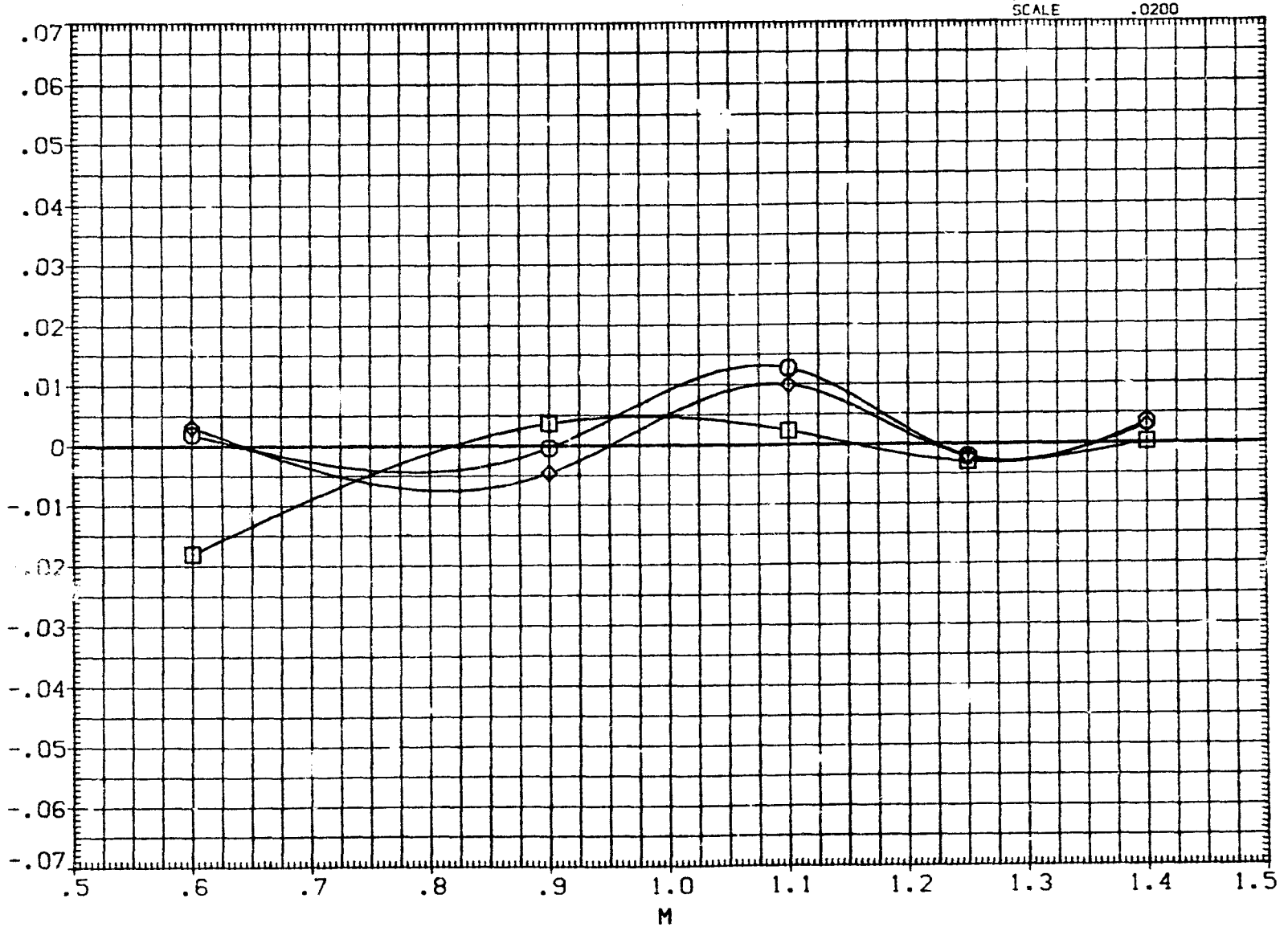


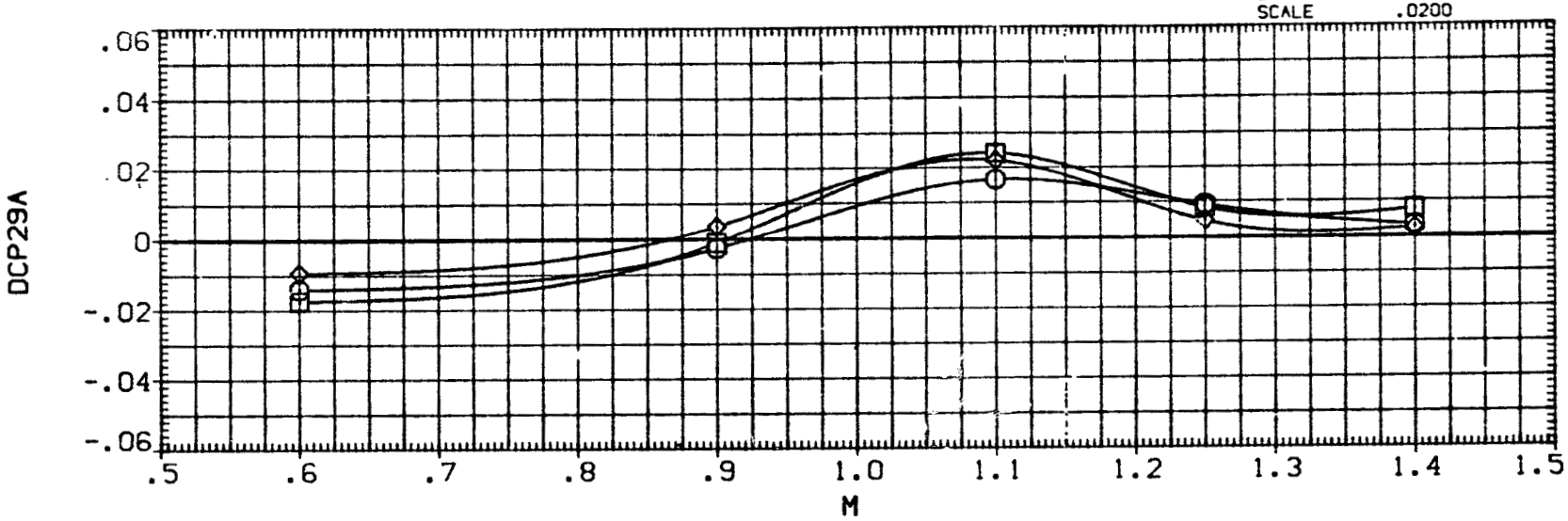

FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(CE4Q20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | CE4Q20 | .600 | CE4Q21 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | CE4Q22 | 1.100 | CE4Q23 | 1.250 |
| ◇ | 4.000 | | | | | CE4Q24 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



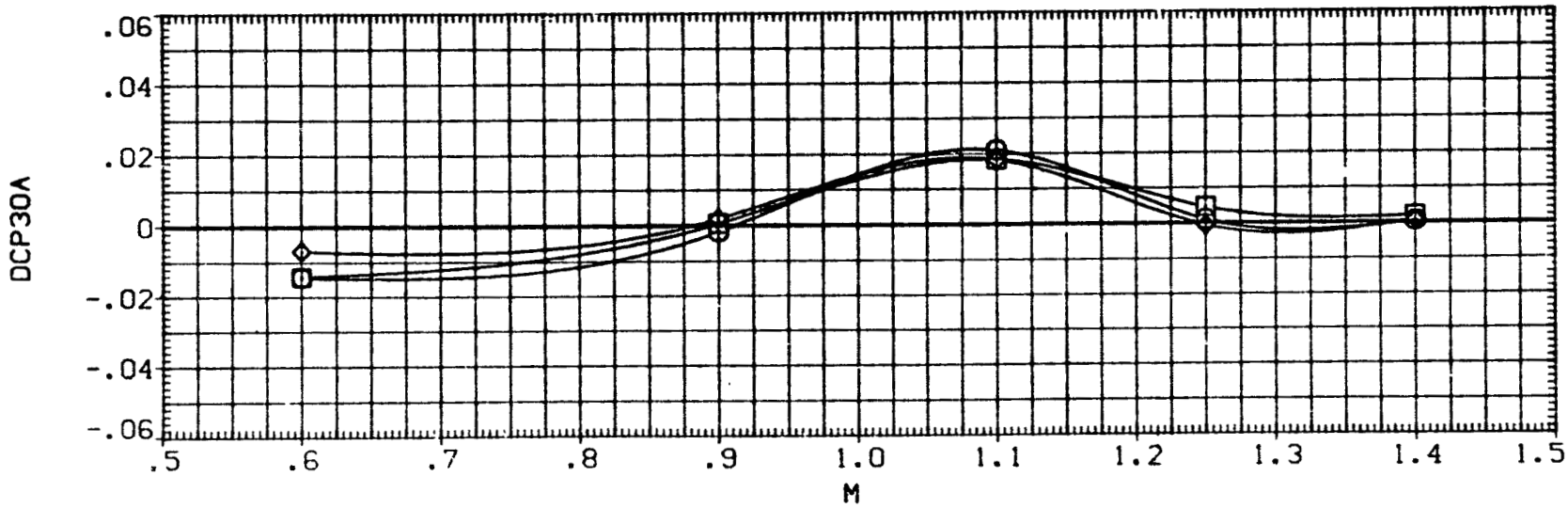




FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(CE4P20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | BETA |
|---|---|
| ○ | -4.000 |
| □ | .000 |
| ◇ | 4.000 |

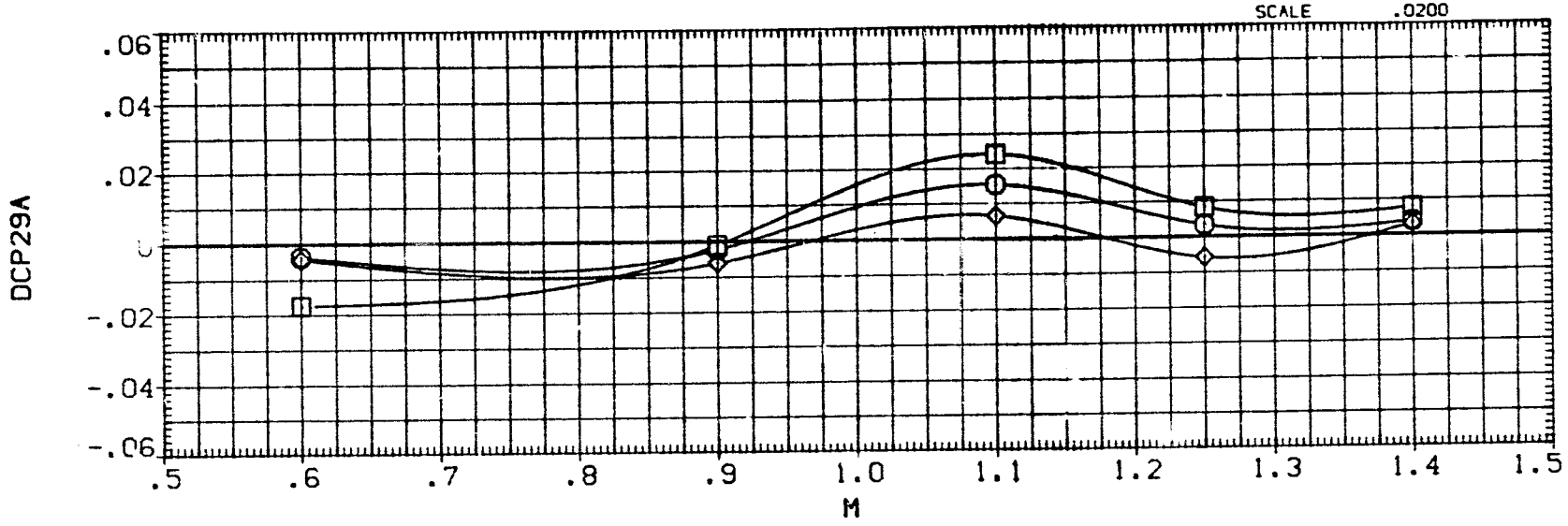
PARAMETRIC VALUES

| | | | | |
|---|---|---|---|---|
| ALPHA | .000 | ELV-IB | .000 | |
| ELV-OB | .000 | RN/L | 3.400 | |

| DATASET | MACH |
|---|---|
| CE4P20 | .600 |
| CE4P22 | 1.100 |
| CE4P24 | 1.400 |
| CE4P21 | .900 |
| CE4P23 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



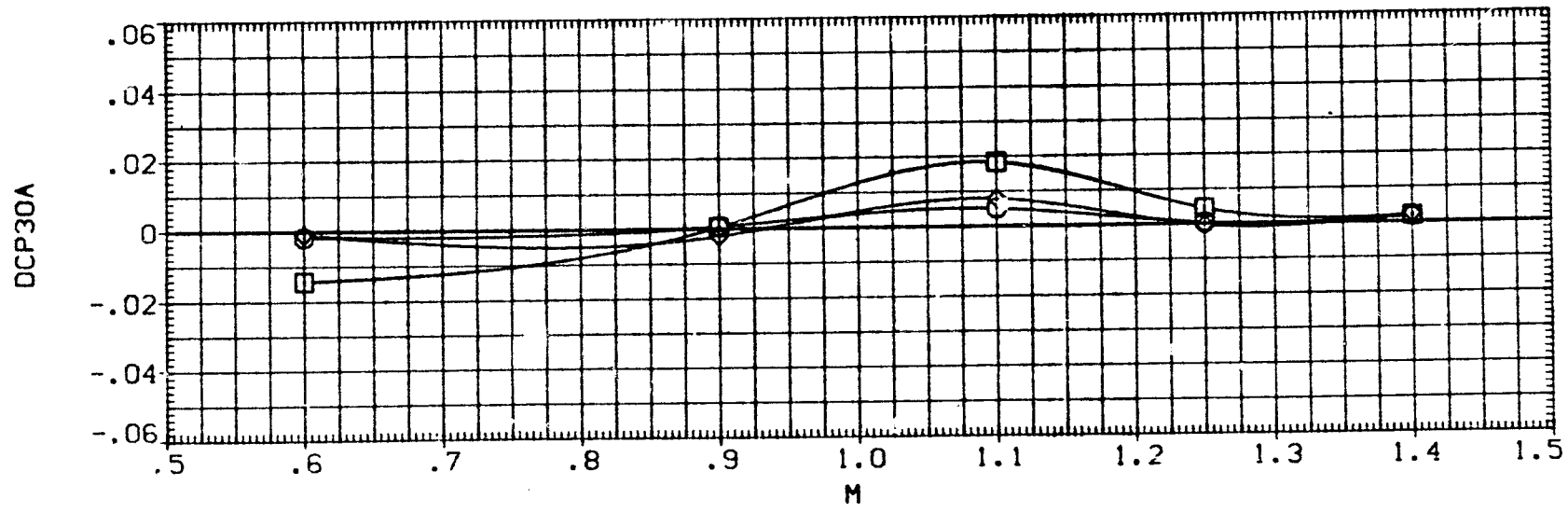




FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(HE4Q20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | ALPHA |
|---|---|
| ◇ | -4.000 |
| □ | .000 |
| ◇ | 4.000 |

PARAMETRIC VALUES

| | | | | |
|---|---|---|---|---|
| BETA | .000 | ELV-IB | .000 | |
| ELV-OB | .000 | RN/L | 3.400 | |

| DATASET | MACH |
|---|---|
| HE4Q20 | .600 |
| HE4Q22 | 1.100 |
| HE4Q24 | 1.400 |

| DATASET | MACH |
|---|---|
| HE4Q21 | .900 |
| HE4Q23 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

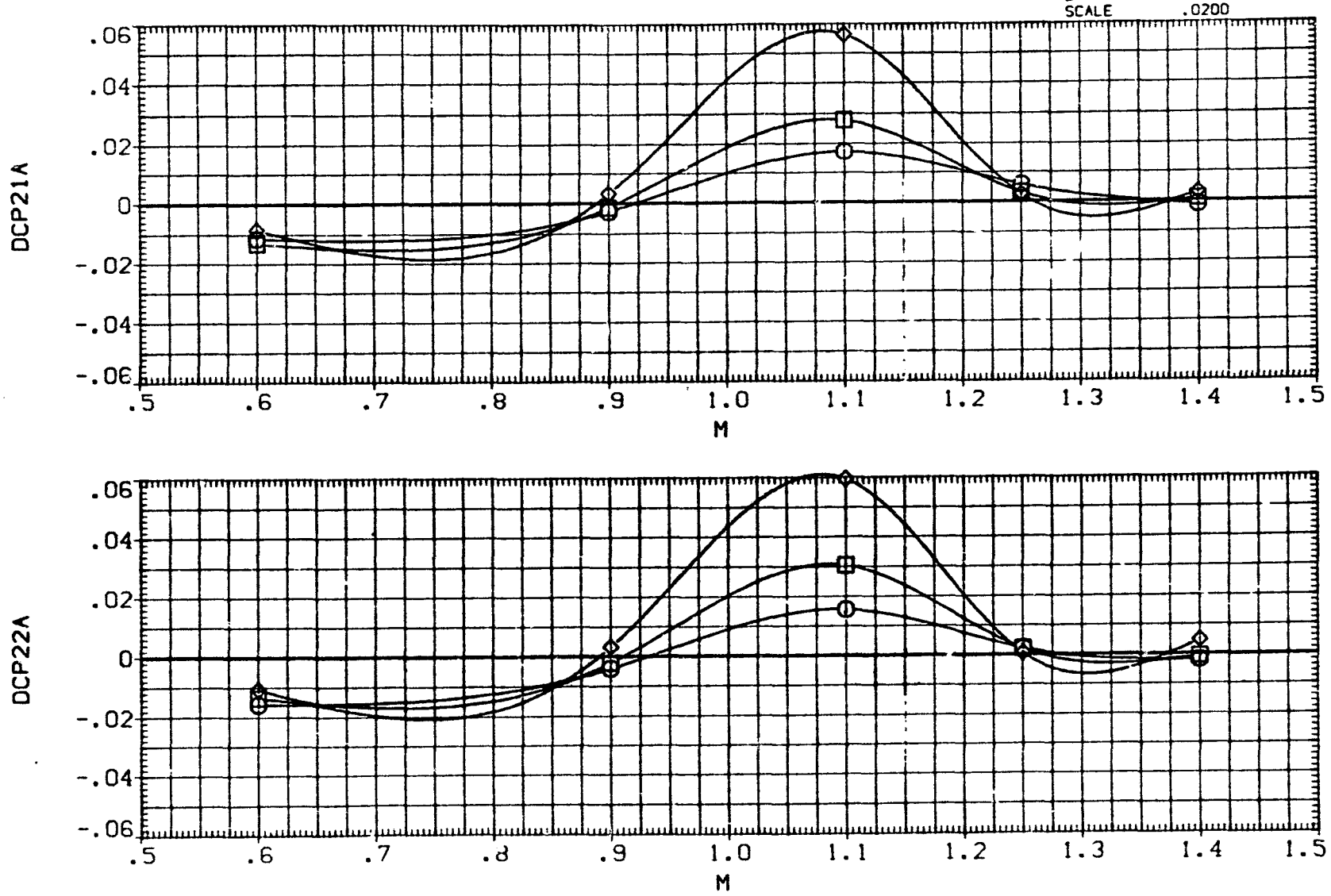



FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(HE4P20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | BETA |
|---|---|
| ○ | -4.000 |
| □ | .000 |
| ◇ | 4.000 |

PARAMETRIC VALUES

| | | | | |
|---|---|---|---|---|
| ALPHA | .000 | ELV-IB | .000 | |
| ELV-OB | .000 | RN/L | 3.400 | |

| DATASET | MACH |
|---|---|
| HE4P20 | .600 |
| HE4P22 | 1.100 |
| HE4P24 | 1.400 |
| HE4P21 | .900 |
| HE4P23 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .000u | IN. |
| SCALE | .0200 | |

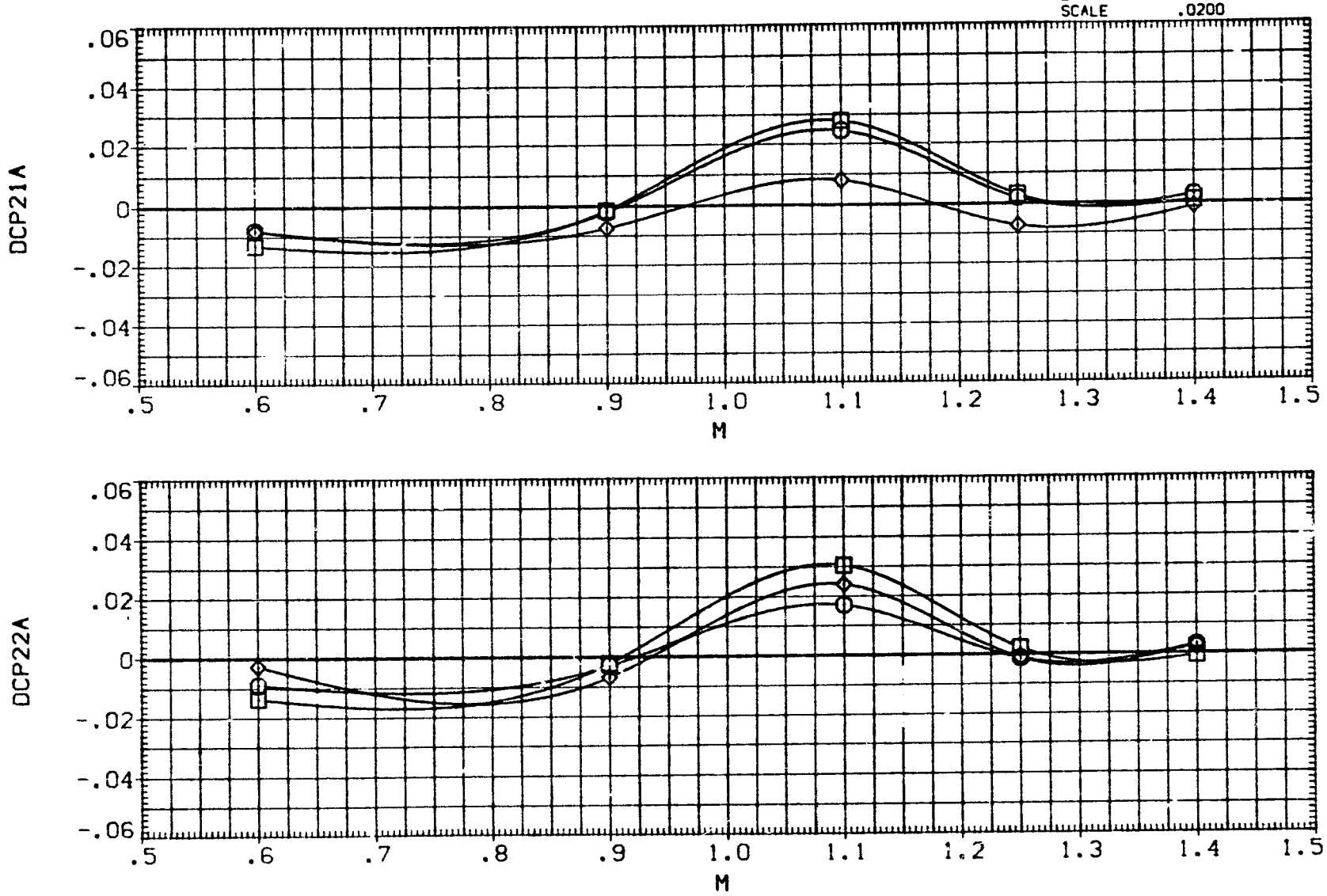


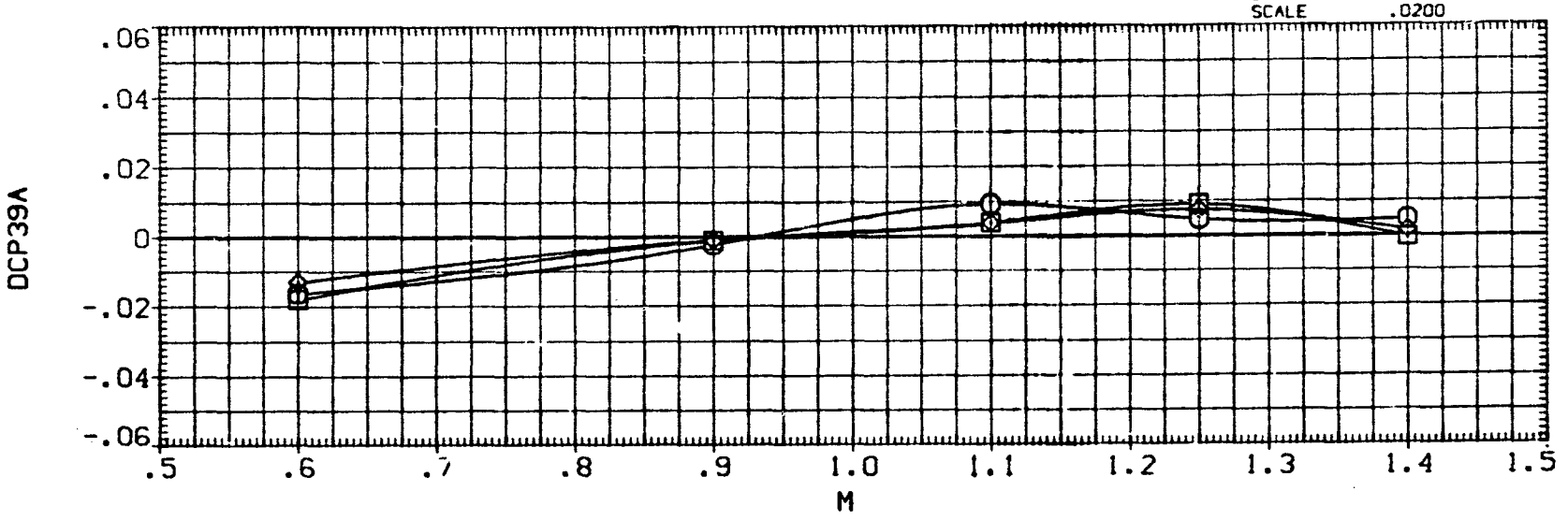

FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(JE4Q20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | ALPHA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-1B | .000 | JE4Q20 | .600 | JE4Q21 | .900 |
| □ | .000 | ELV-0B | .000 | RN/L | 3.400 | JE4Q22 | 1.100 | JE4Q23 | 1.250 |
| ◇ | 4.000 | | | | | JE4Q24 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



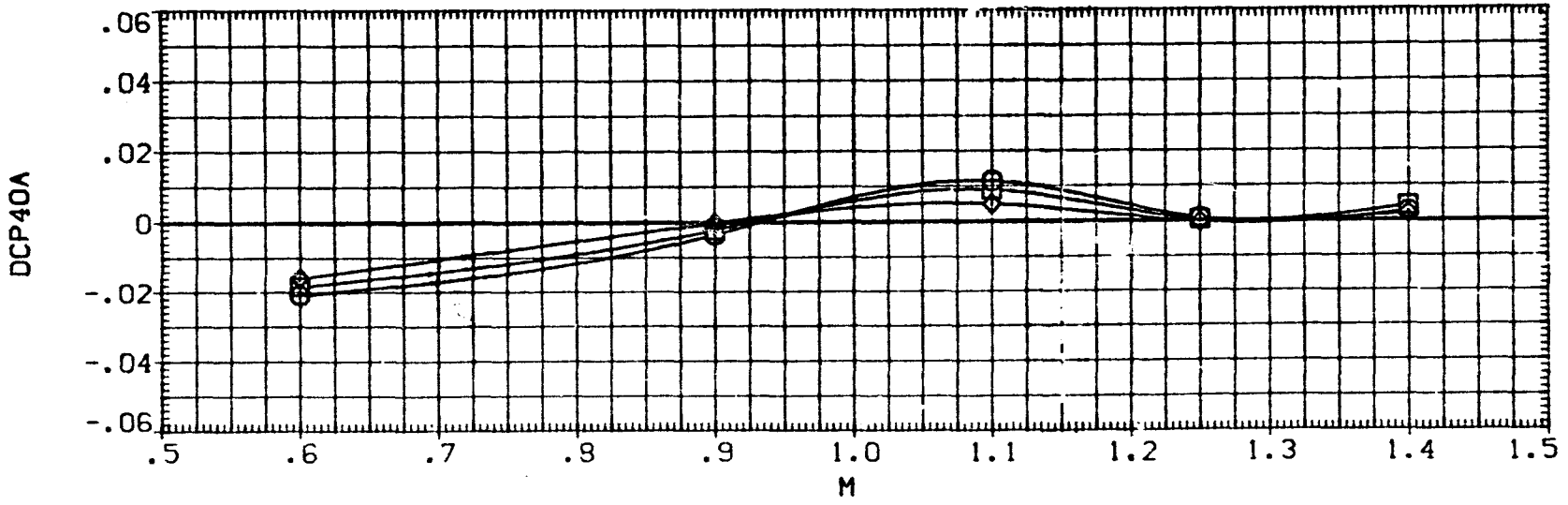




FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

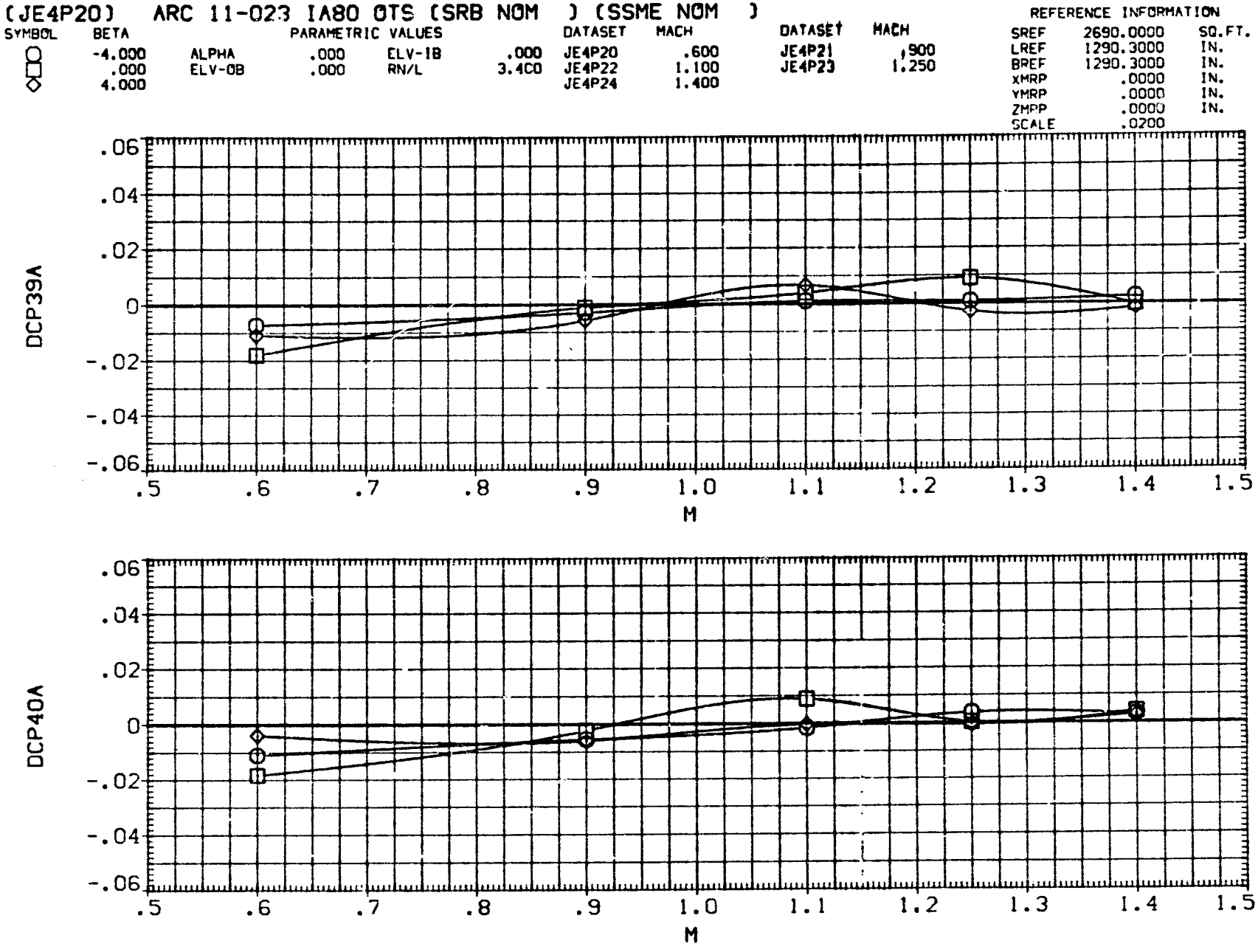


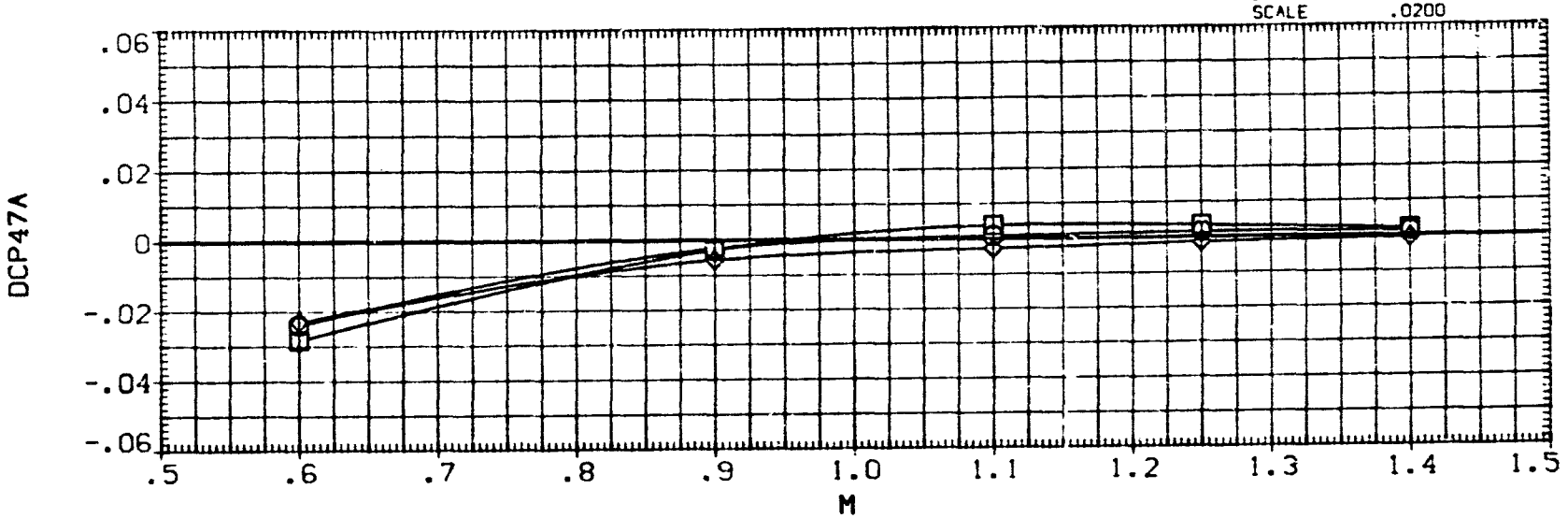

FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(KE4Q20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ○ | -4.000 | BETA | .000 | ELV-IB | .000 | KE4Q20 | .600 | KE4021 | .900 |
| □ | .000 | ELV-OB | .000 | RN/L | 3.400 | KE4Q22 | 1.100 | KE4023 | 1.250 |
| ◇ | 4.000 | | | | | KE4Q24 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



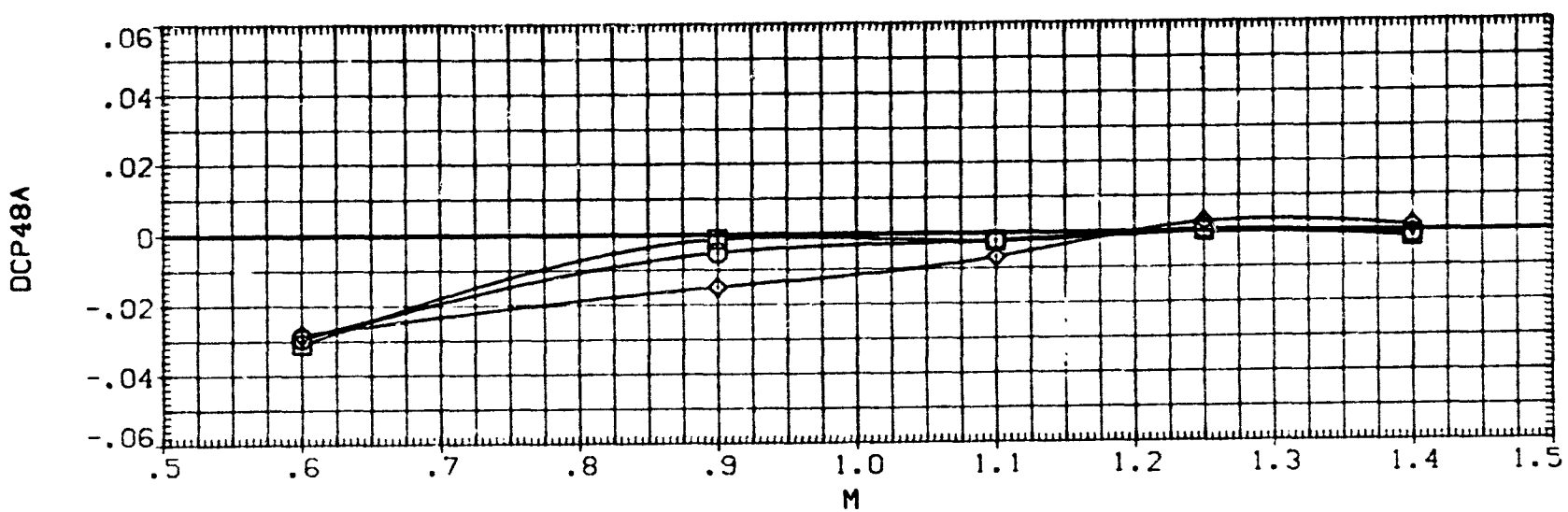




FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

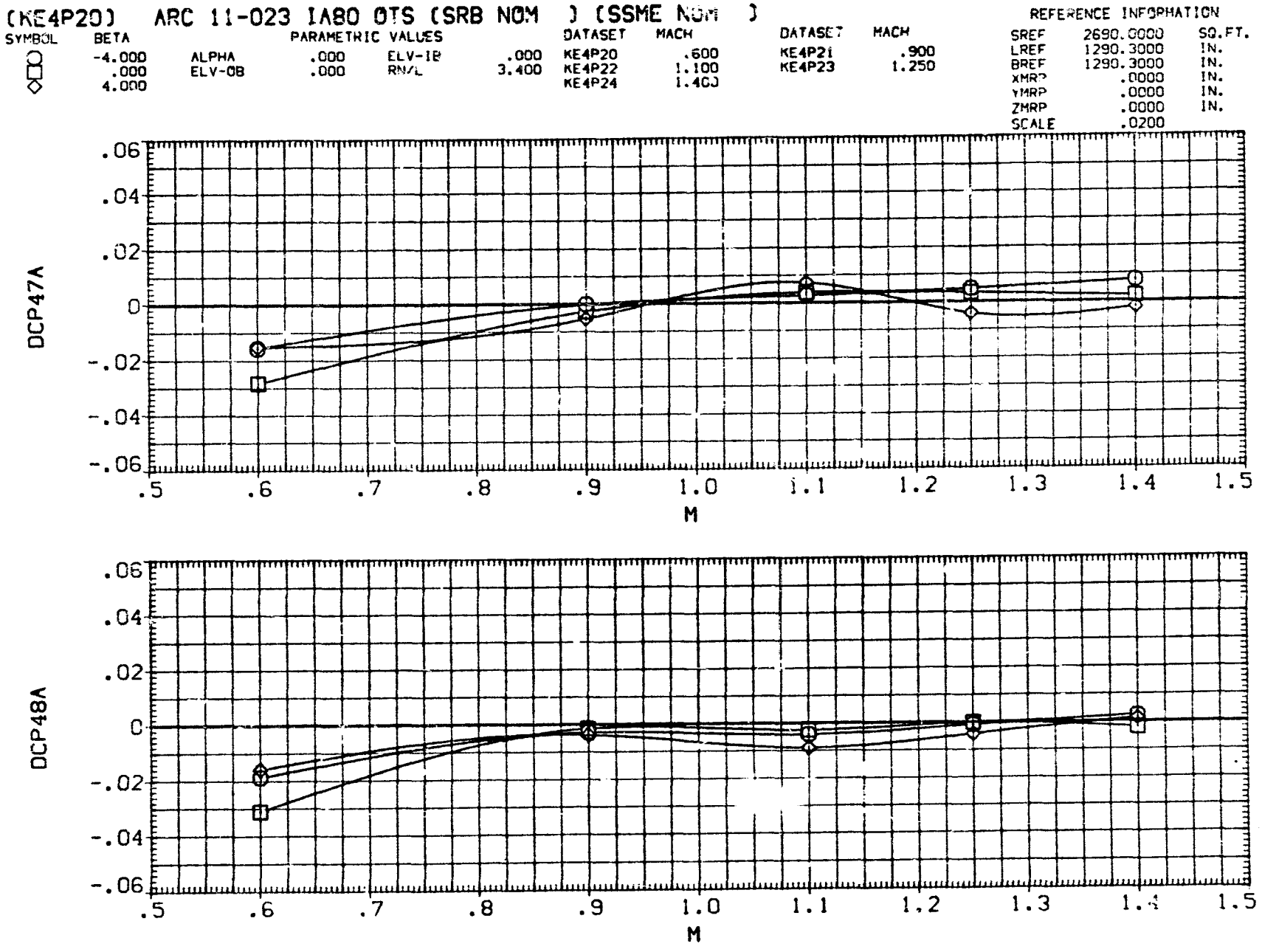


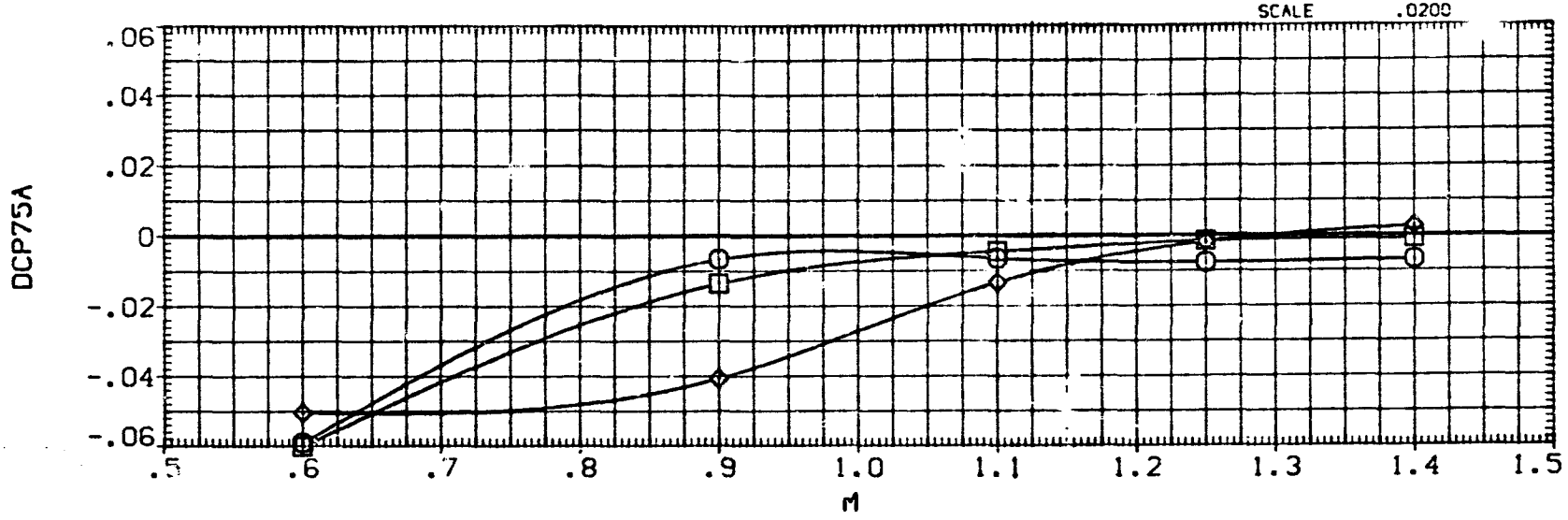

FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(DE4Q20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | ALPHA | PARAMETRIC VALUES | | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ◇ | -4.000 | BETA | .000 | ELV-1B | .000 | DE4Q20 | .600 | DE4Q21 | .900 |
| □ | .000 | ELV-0B | .000 | RN/L | 3.400 | DE4Q22 | 1.100 | DE4Q23 | 1.250 |
| ◇ | 4.000 | | | | | DE4Q24 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 990.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |



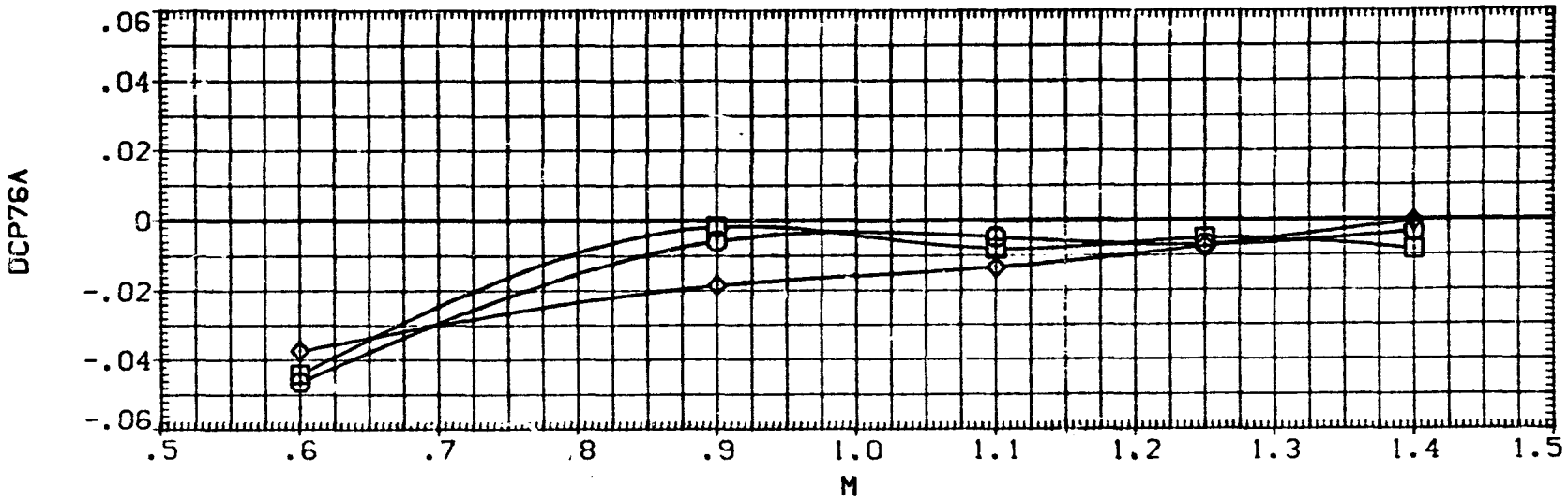




FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

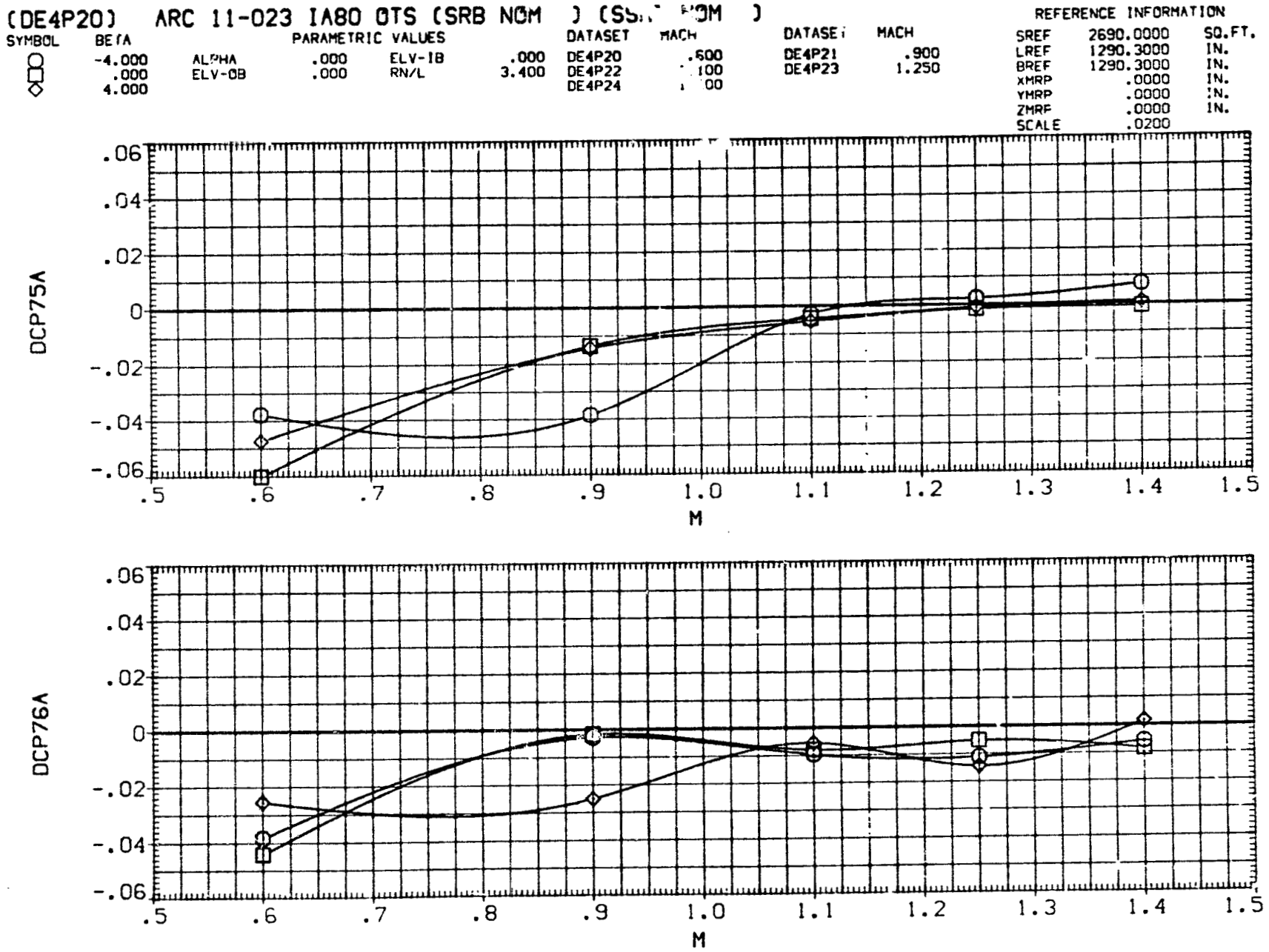



FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(LE4020) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | ALPHA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| | -4.000 | BETA | .000 | ELV-IB | .000 | LE4020 | .600 | LE4021 | .900 |
| | .000 | ELV-OB | .000 | RN/L | 3.400 | LE4022 | 1.100 | LE4023 | 1.250 |
| | 4.000 | | | | | LE4024 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

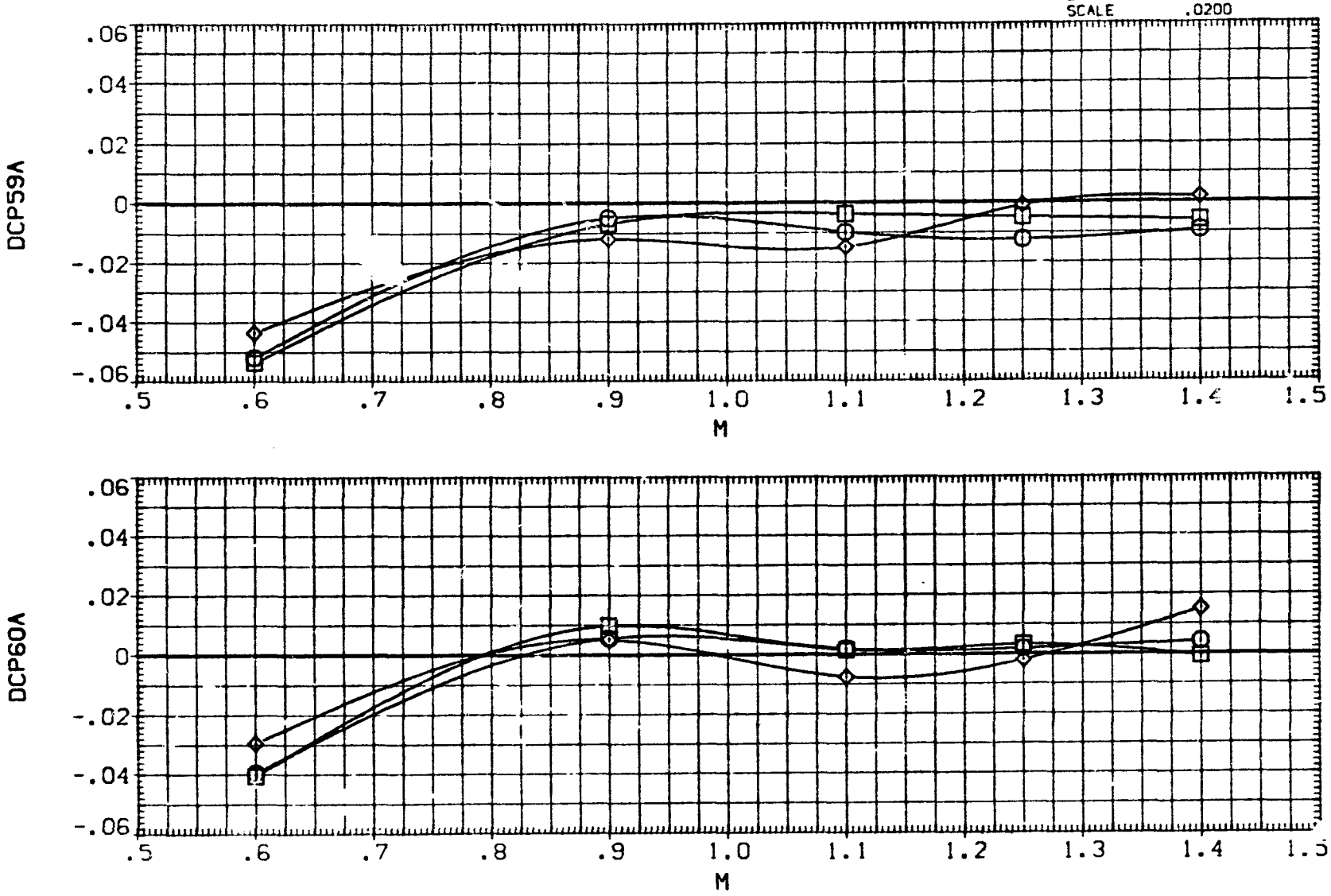



FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(LE4P20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| | -4.000 | ALPHA | .000 | ELV-IB | .000 | LE4P20 | .600 | LE4P21 | .900 |
| | .000 | ELV-OB | .000 | RN/L | 3.400 | LE4P22 | 1.100 | LE4P23 | 1.250 |
| | 4.000 | | | | | LE4P24 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

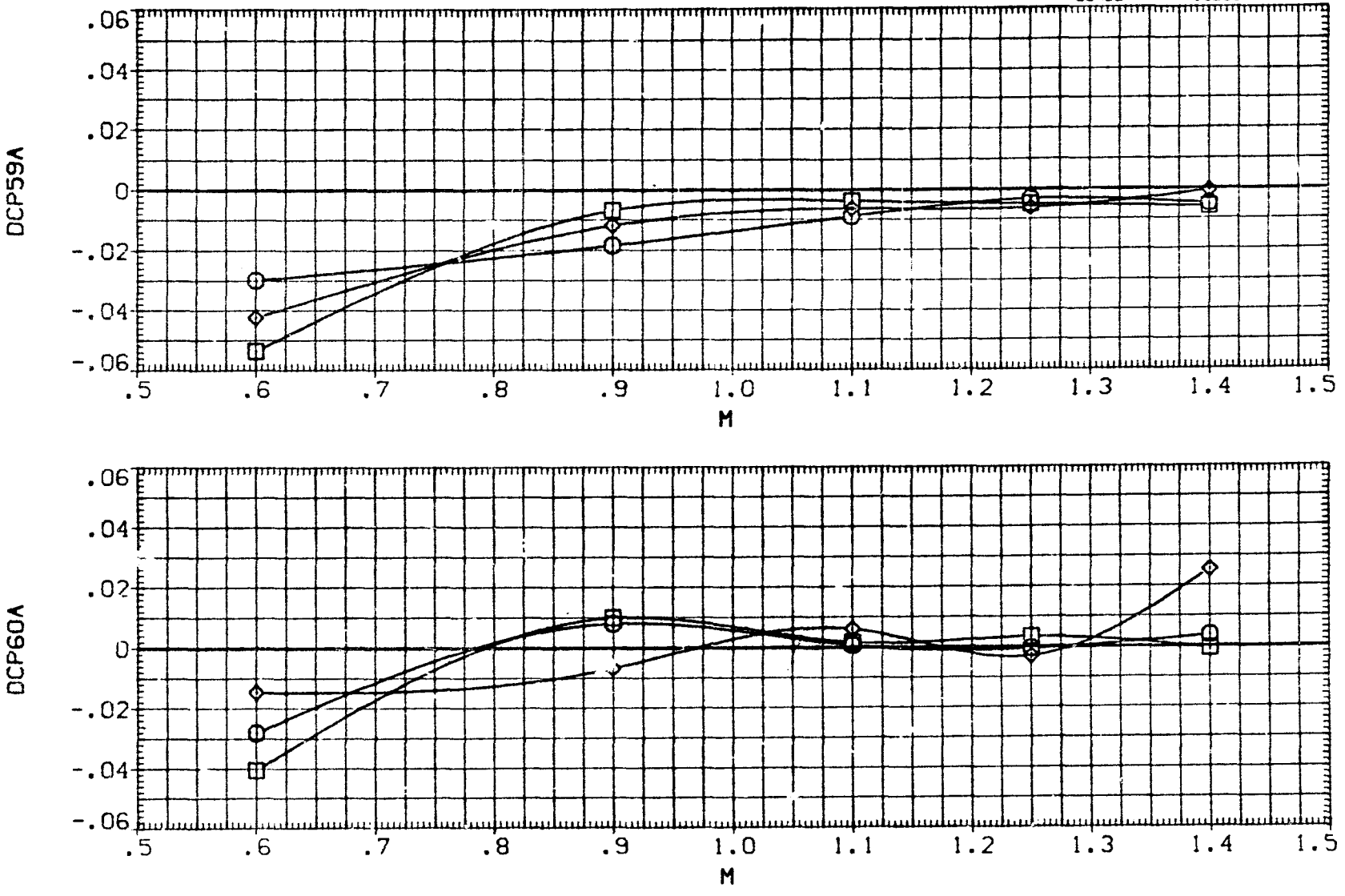



FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(ME4Q20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | ALPHA |
|---|---|
| ○ | -4.000 |
| □ | .000 |
| ◇ | 4.000 |

PARAMETRIC VALUES

| | | | | |
|---|---|---|---|---|
| BETA | .000 | ELV-IB | .000 | |
| ELV-OB | .000 | RN/L | 3.400 | |

| DATASET | MACH |
|---|---|
| ME4Q20 | .600 |
| ME4Q22 | 1.100 |
| ME4Q24 | 1.400 |

| DATASET | MACH |
|---|---|
| ME4Q21 | .900 |
| ME4Q23 | 1.250 |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

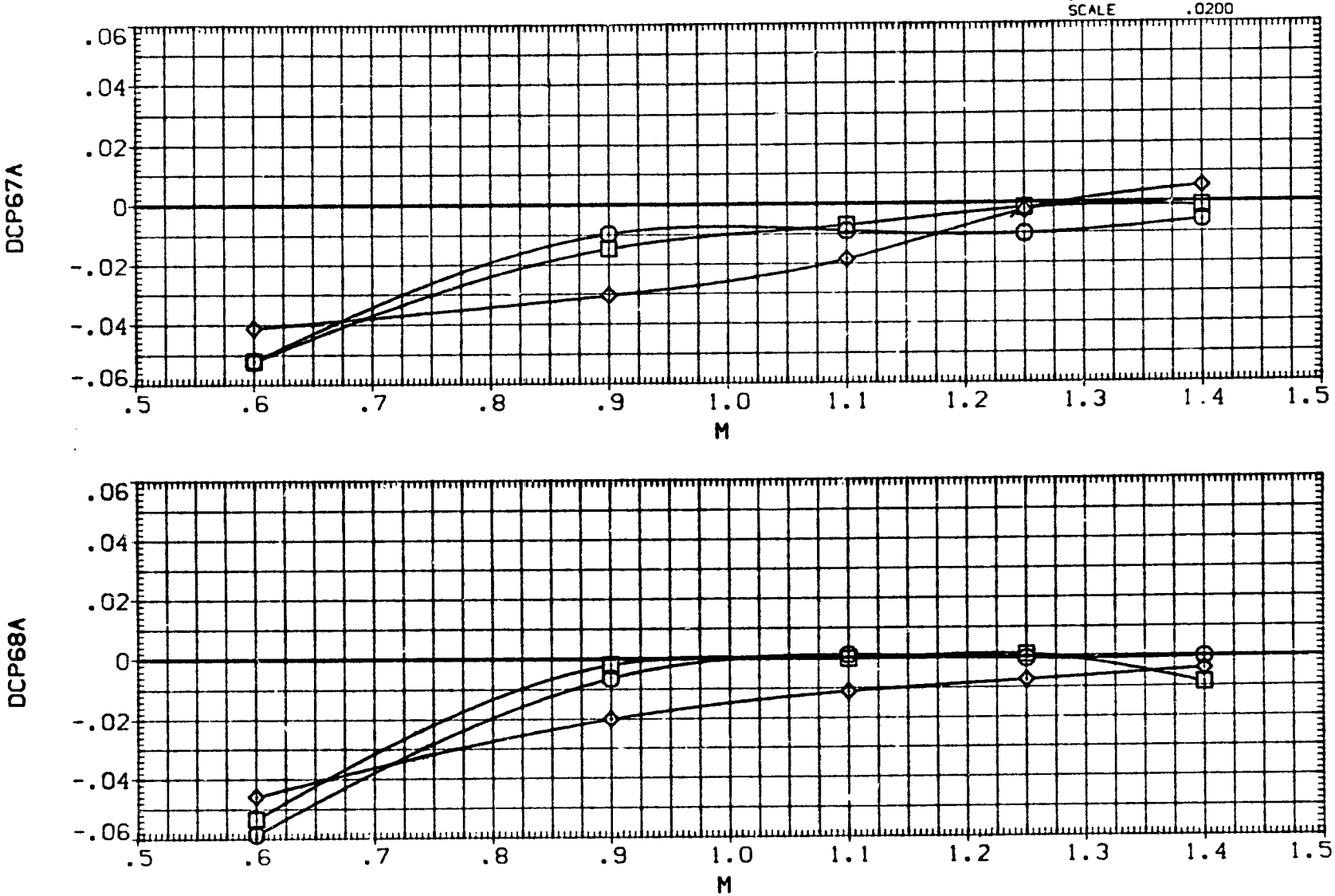



FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(ME4P20) ARC 11-023 IA80 OTS (SRB NOM ) (SSME NOM )

| SYMBOL | BETA | | PARAMETRIC VALUES | | | DATASET | MACH | DATASET | MACH |
|---|---|---|---|---|---|---|---|---|---|
| ◻ | -4.000 | ALPHA | .000 | ELV-IB | .000 | ME4P20 | .600 | ME4P21 | .900 |
| ◇ | .000 | ELV-OB | .000 | RN/L | 3.400 | ME4P22 | 1.100 | ME4P23 | 1.250 |
| | 4.000 | | | | | ME4P24 | 1.400 | | |

REFERENCE INFORMATION

| | | |
|---|---|---|
| SREF | 2690.0000 | SQ.FT. |
| LREF | 1290.3000 | IN. |
| BREF | 1290.3000 | IN. |
| XMRP | .0000 | IN. |
| YMRP | .0000 | IN. |
| ZMRP | .0000 | IN. |
| SCALE | .0200 | |

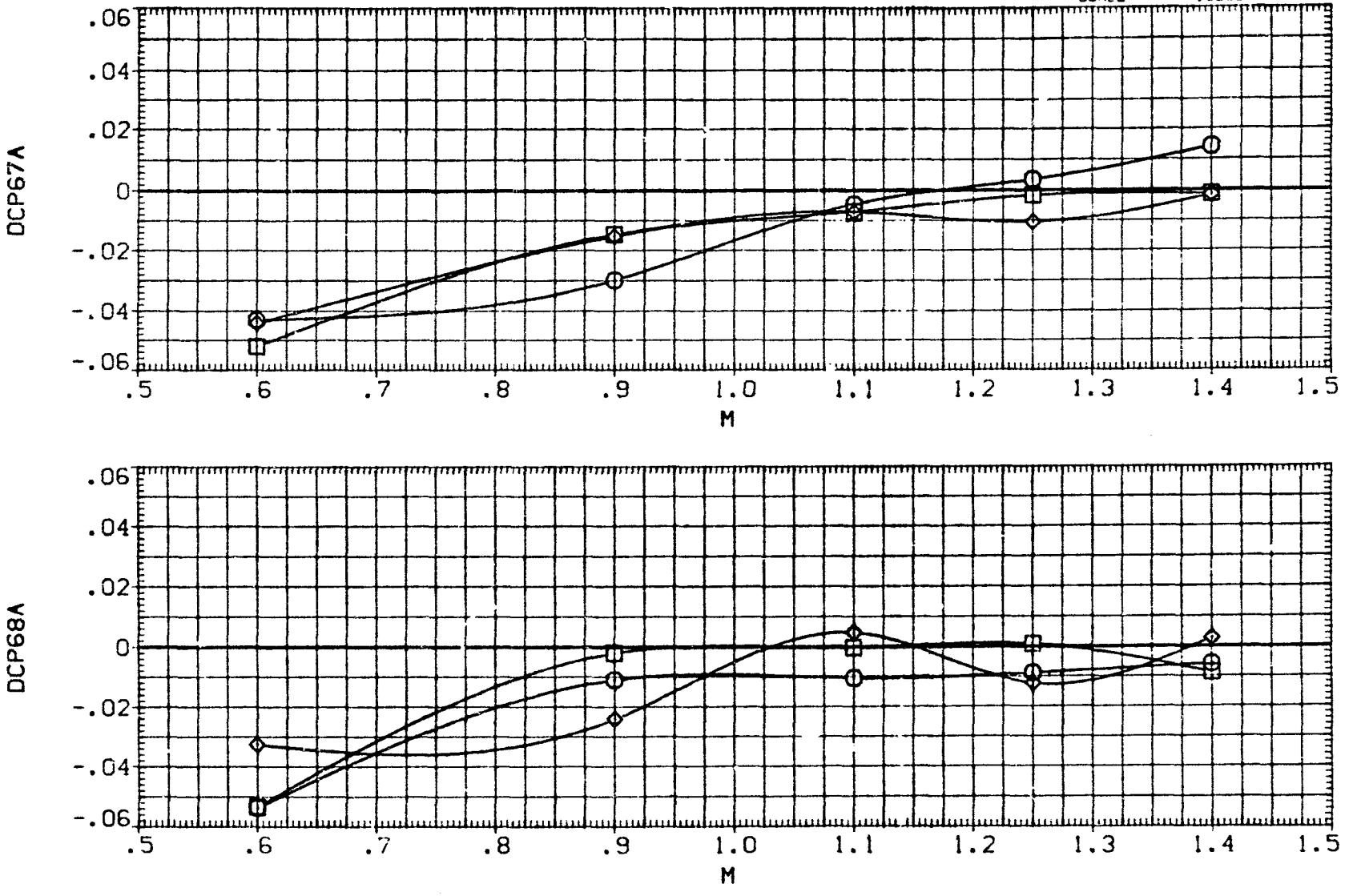



FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE44H28) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE44H20) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE44H11) | △ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE44H95) | ◇ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE44H83) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | .600 | 3.400 |

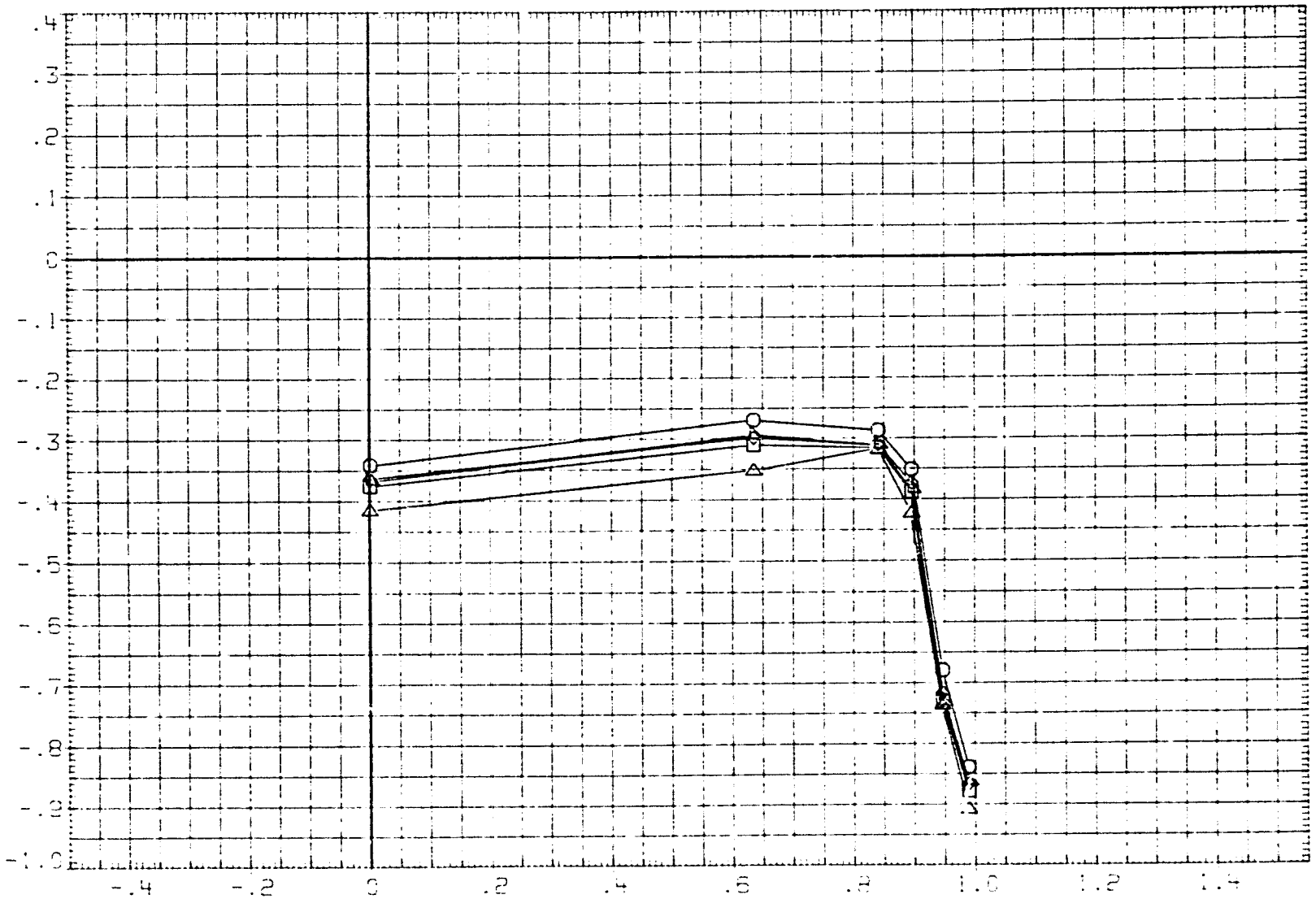



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = -4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (AE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H20) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N* ) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H85) | △ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H83) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | .600 | 3.400 |

FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = -4.000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE44B9) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE44C0) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE44B1) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE44B5) | △ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTJET BASE | .000 | .000 | .600 | 3.400 |
| (AE44B0) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTJET BASE | .000 | .000 | .600 | 3.400 |

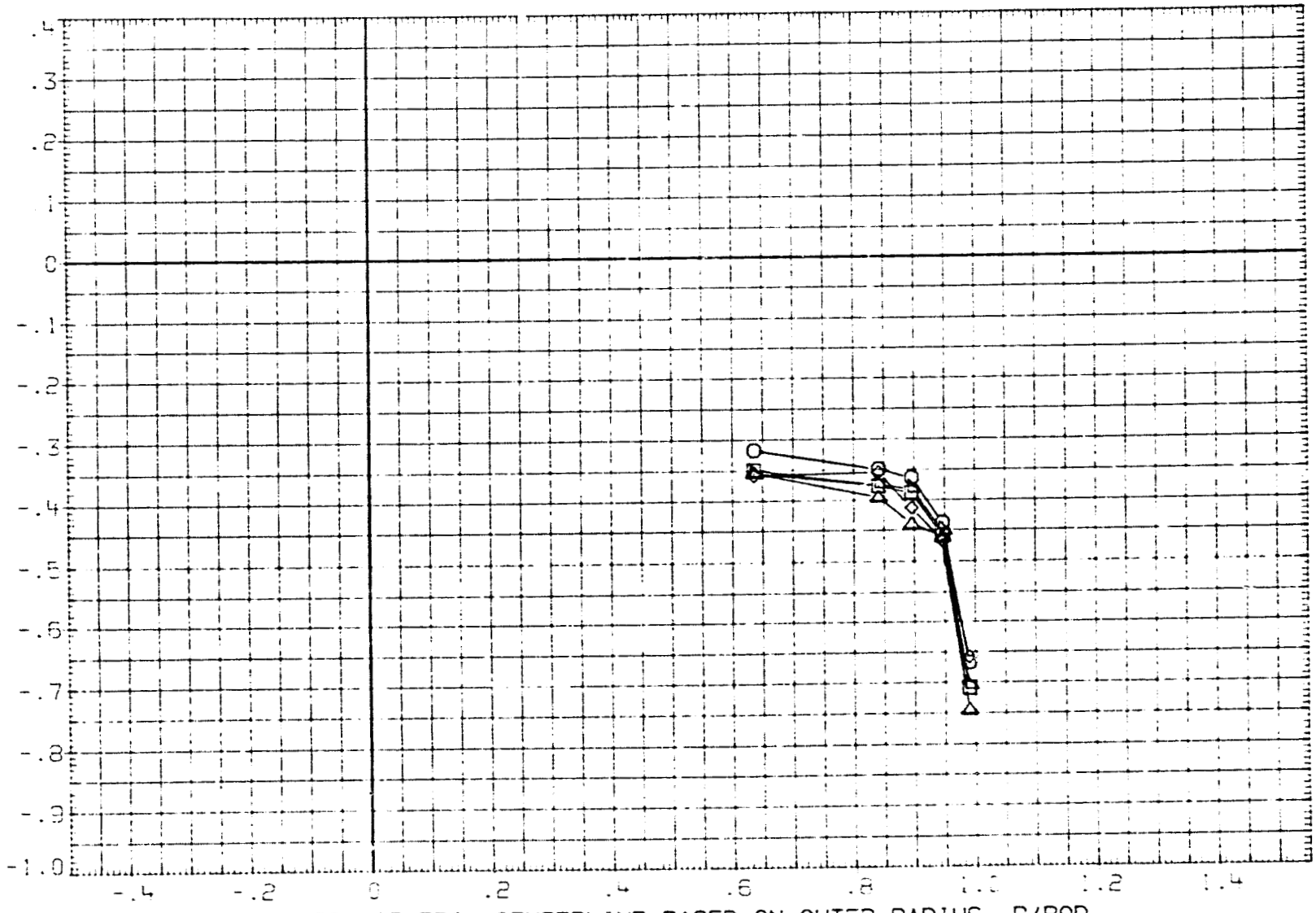



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = -4.000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H20) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H39) | △ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H30) | ◁ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE | .000 | .000 | .600 | 3.400 |

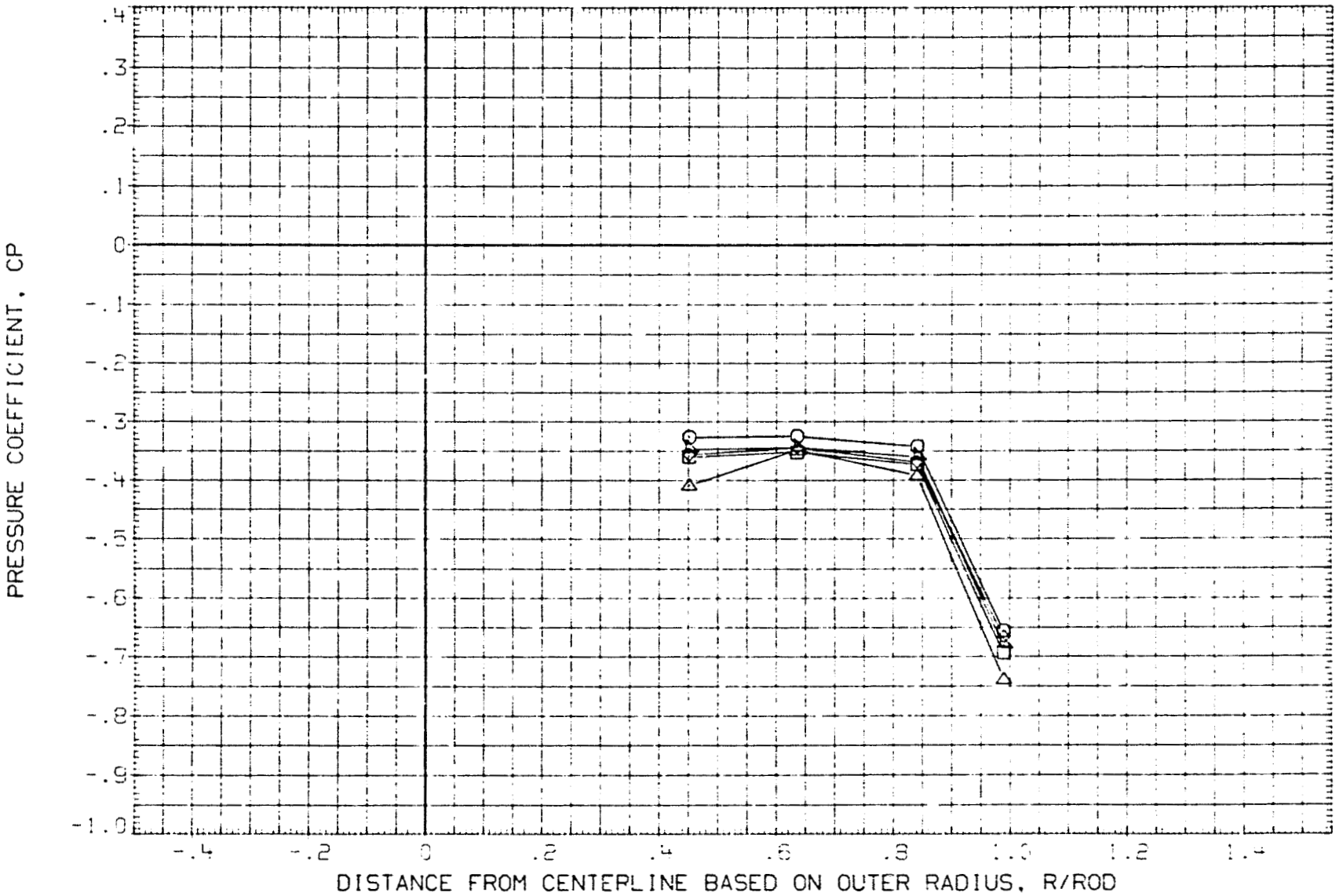



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = -4.000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H20) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N* ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H85) | △ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H80) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .600 | 3.400 |

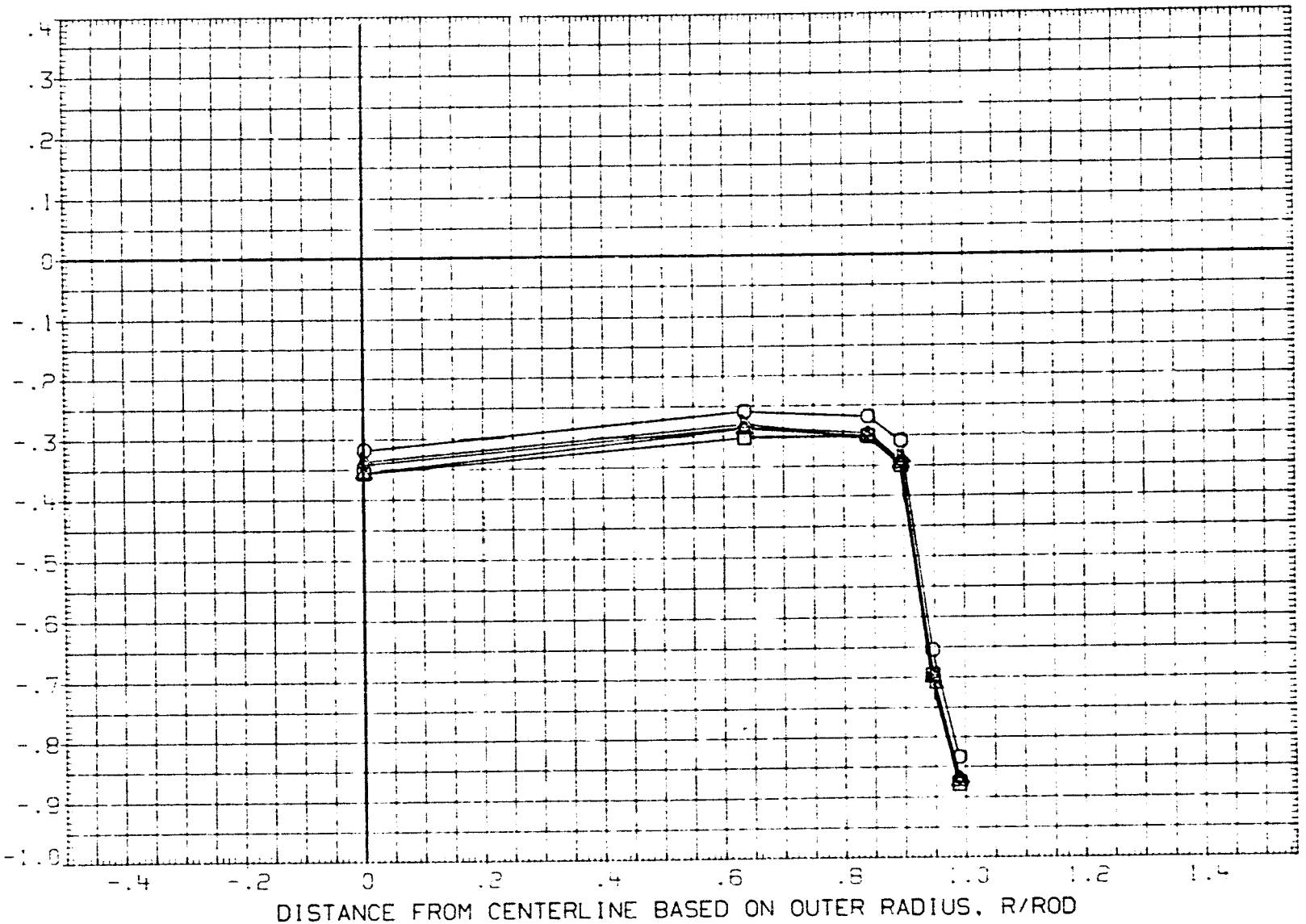



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = .000 PHI =

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H28) | ○ | ARC11-0231AB3 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H20) | □ | ARC11-0231AB3 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H11) | ◇ | ARC11-0231AB3 OTS(SRB=N ORB=N* ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H85) | △ | ARC11-0231AB3 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H30) | ▽ | ARC11-0231AB3 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .600 | 3.400 |

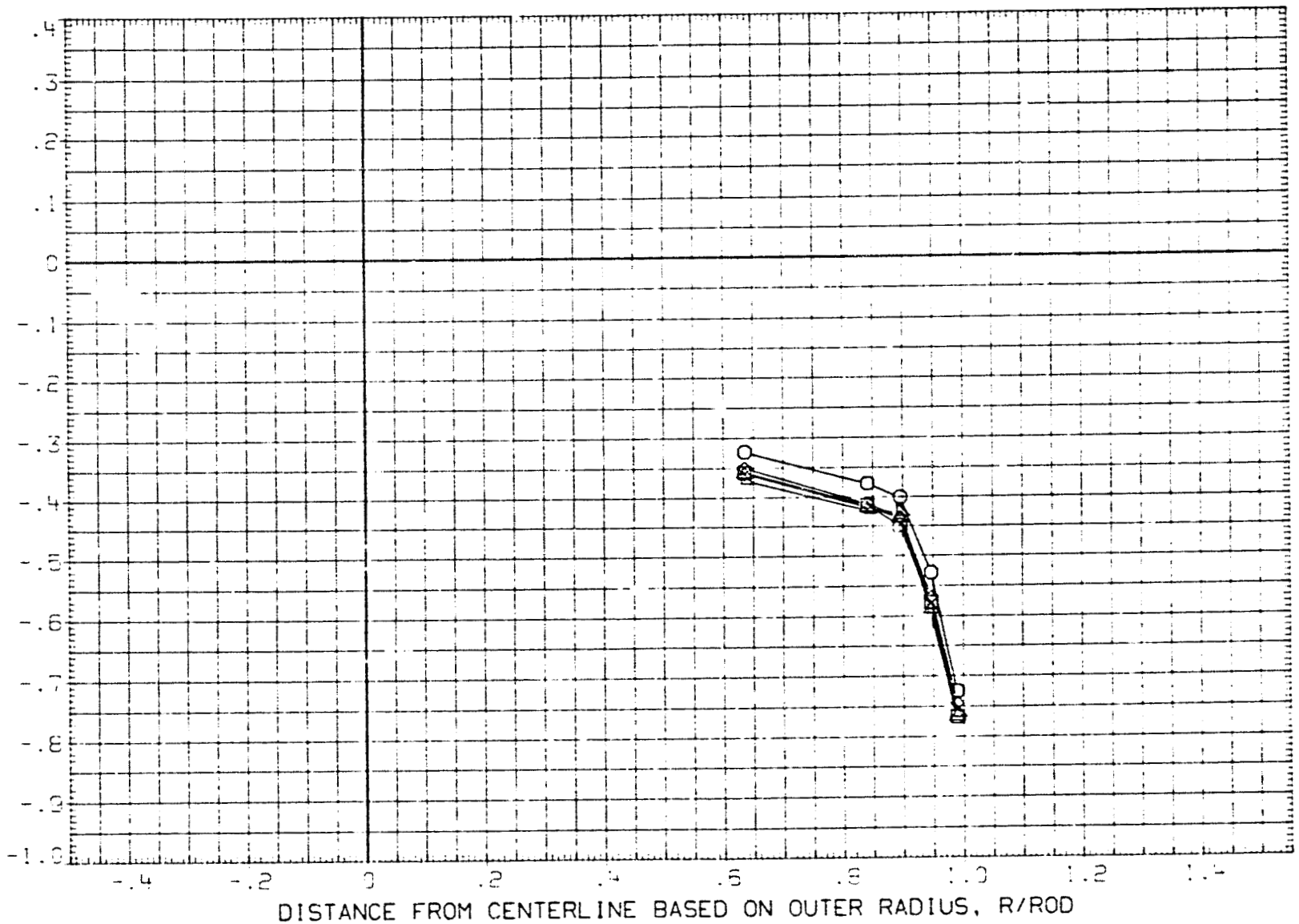



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H29) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H85) | △ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUTJET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H80) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUTJET BASE | .000 | .000 | .600 | 3.400 |

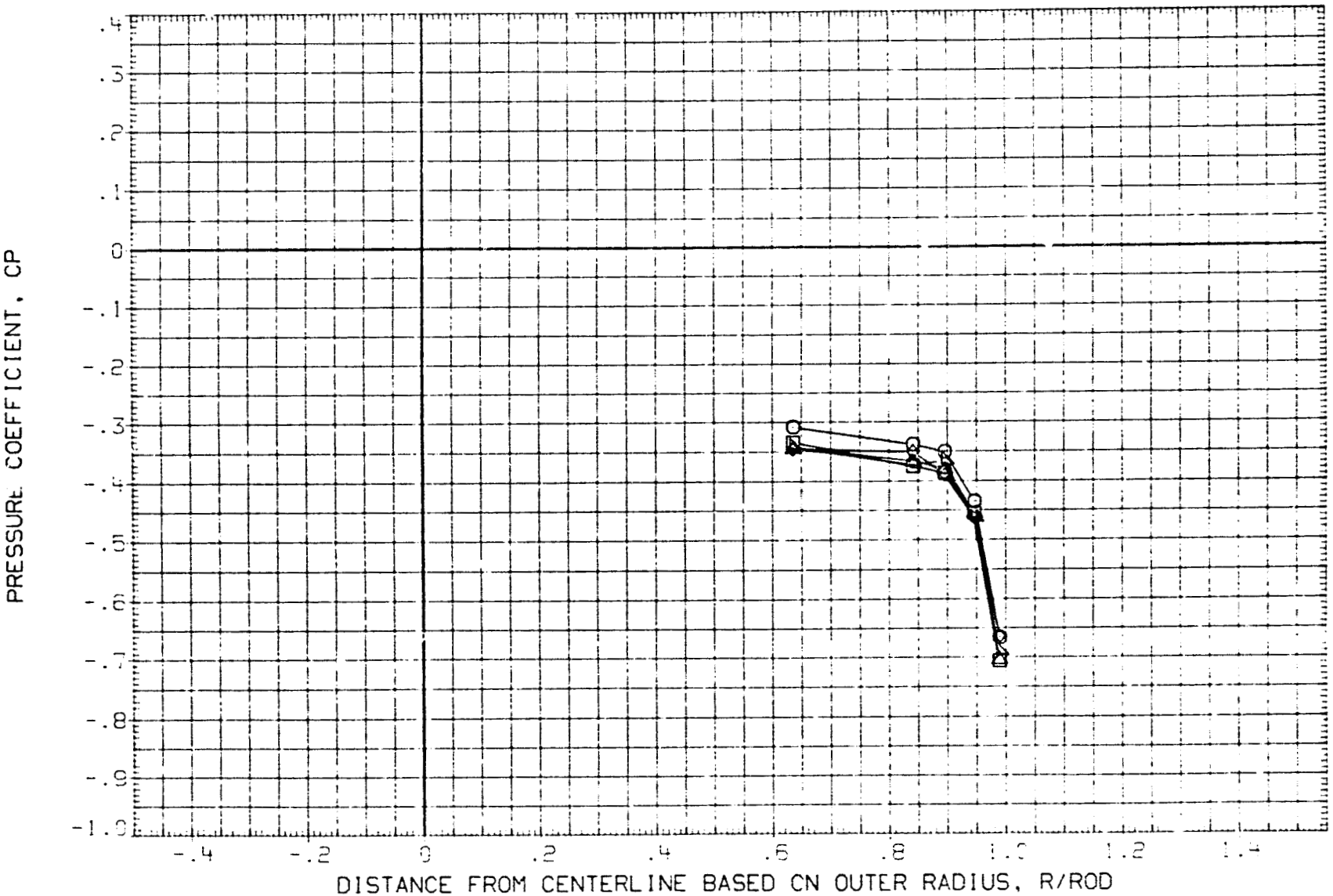



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H28) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H20) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H11) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4HB5) | △ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4HB0) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .600 | 3.400 |

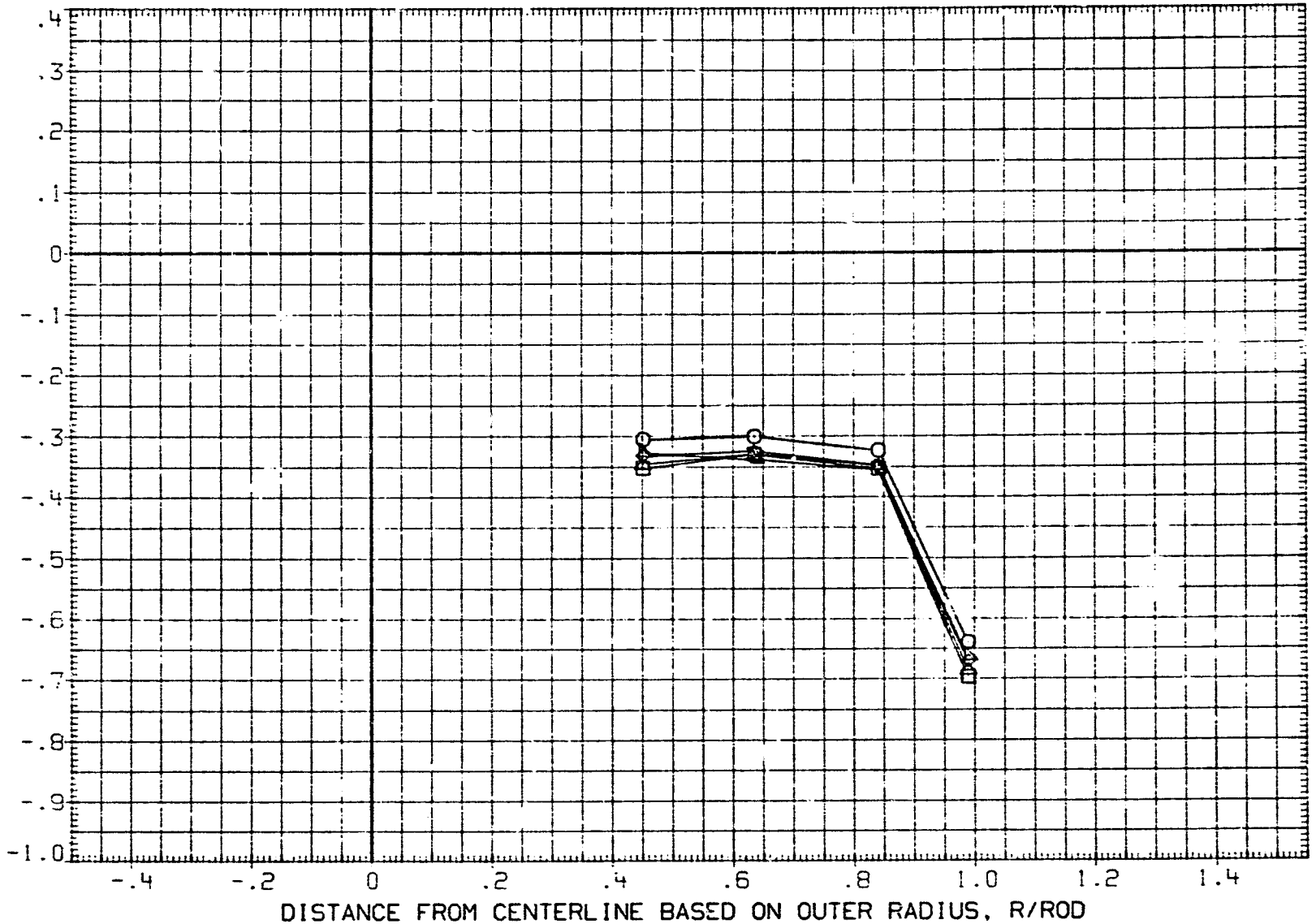



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) ET BASE | .000 | .000 | 600 | 3.400 |
| (AE4H20) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) ET BASE | .000 | .000 | 600 | 3.400 |
| (AE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) ET BASE | .000 | .000 | 600 | 3.400 |
| (AE4H85) | △ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT)ET BASE | .000 | .000 | 600 | 3.400 |
| (AE4H80) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT)ET BASE | .000 | .000 | 600 | 3.400 |

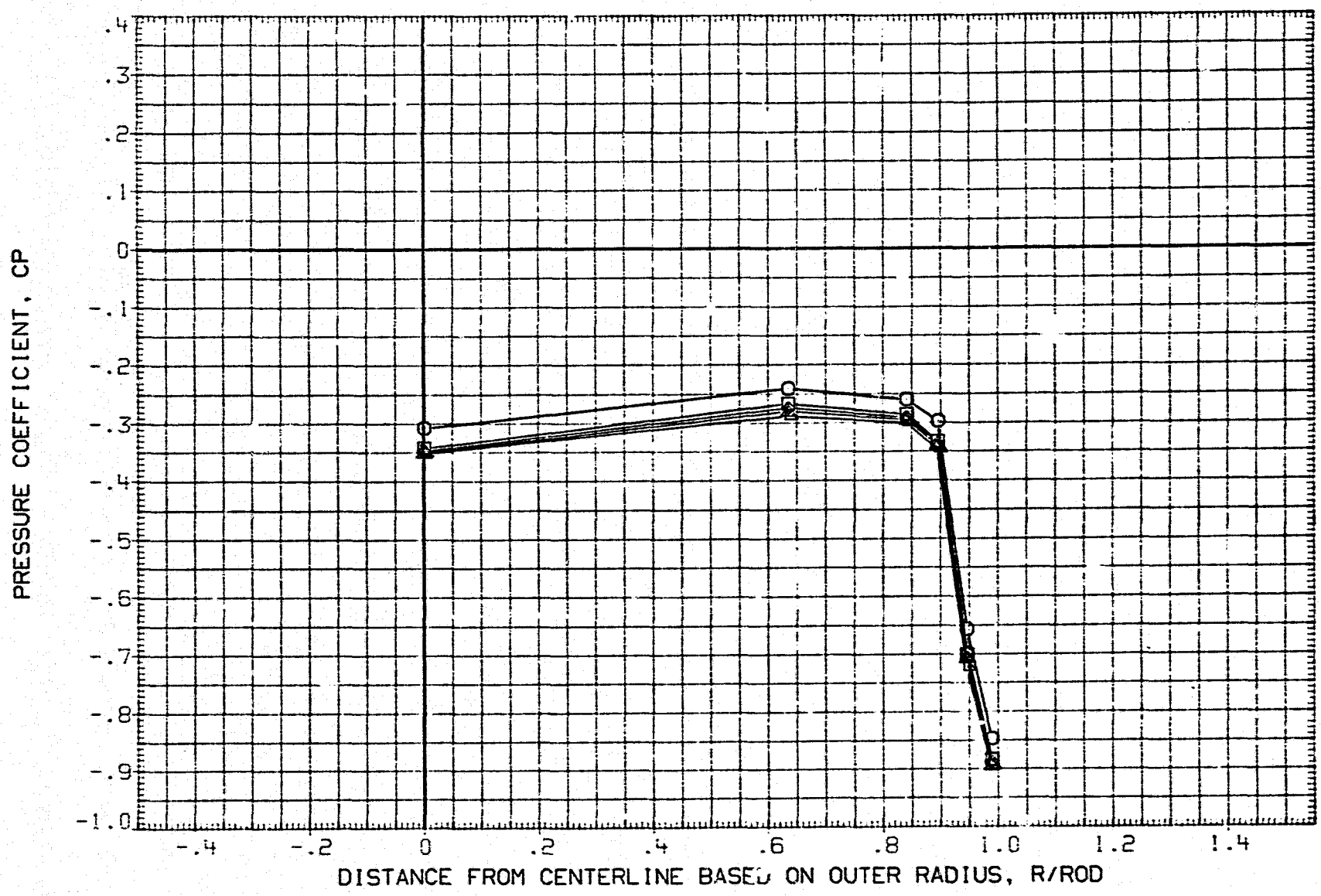



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = 4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H20) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4HB5) | △ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4HB0) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 600 | 3.400 |

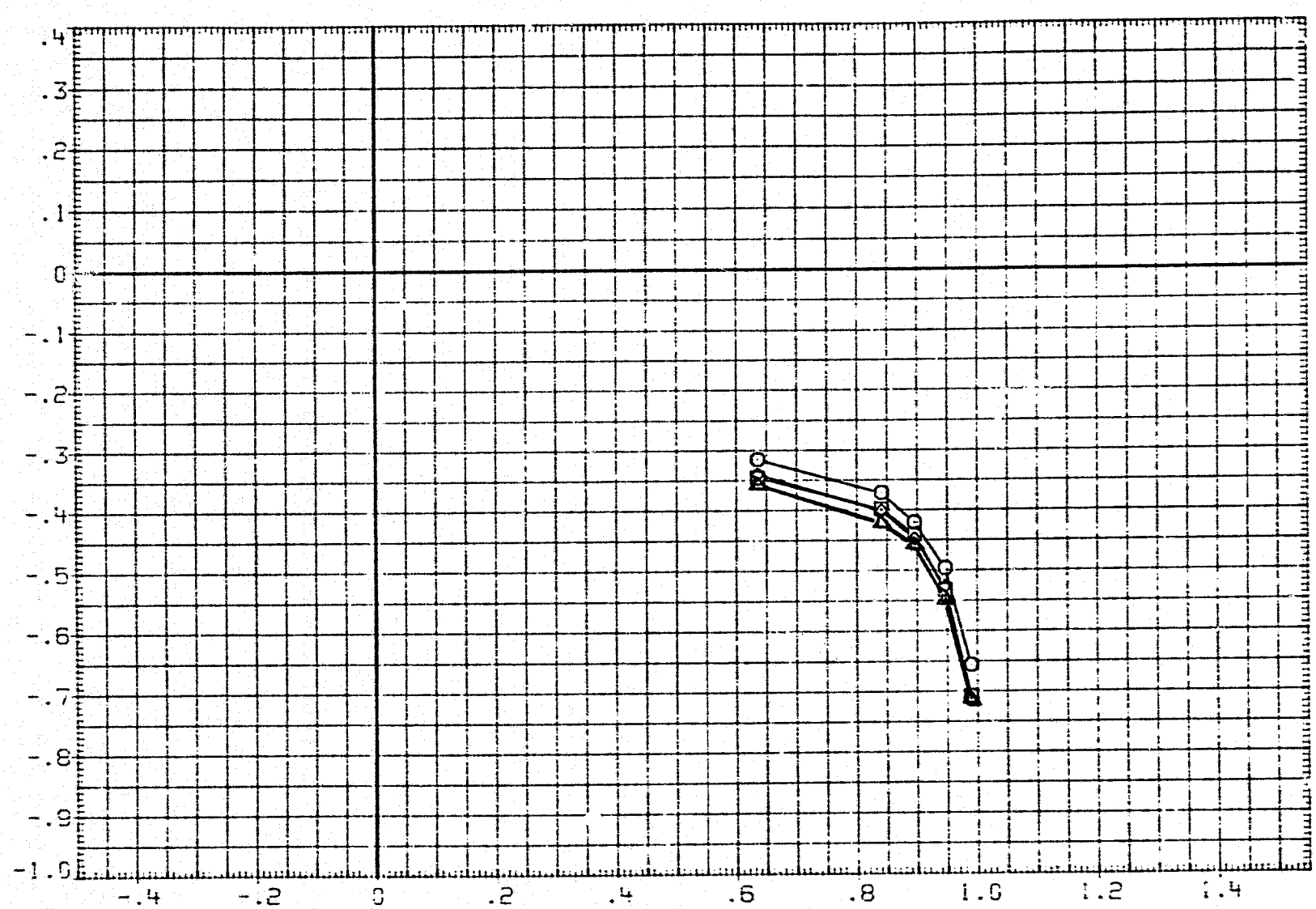



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = 4.000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (AE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H20) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H85) | △ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | 600 | 3.400 |
| (AE4H80) | ▽ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | 600 | 3.400 |

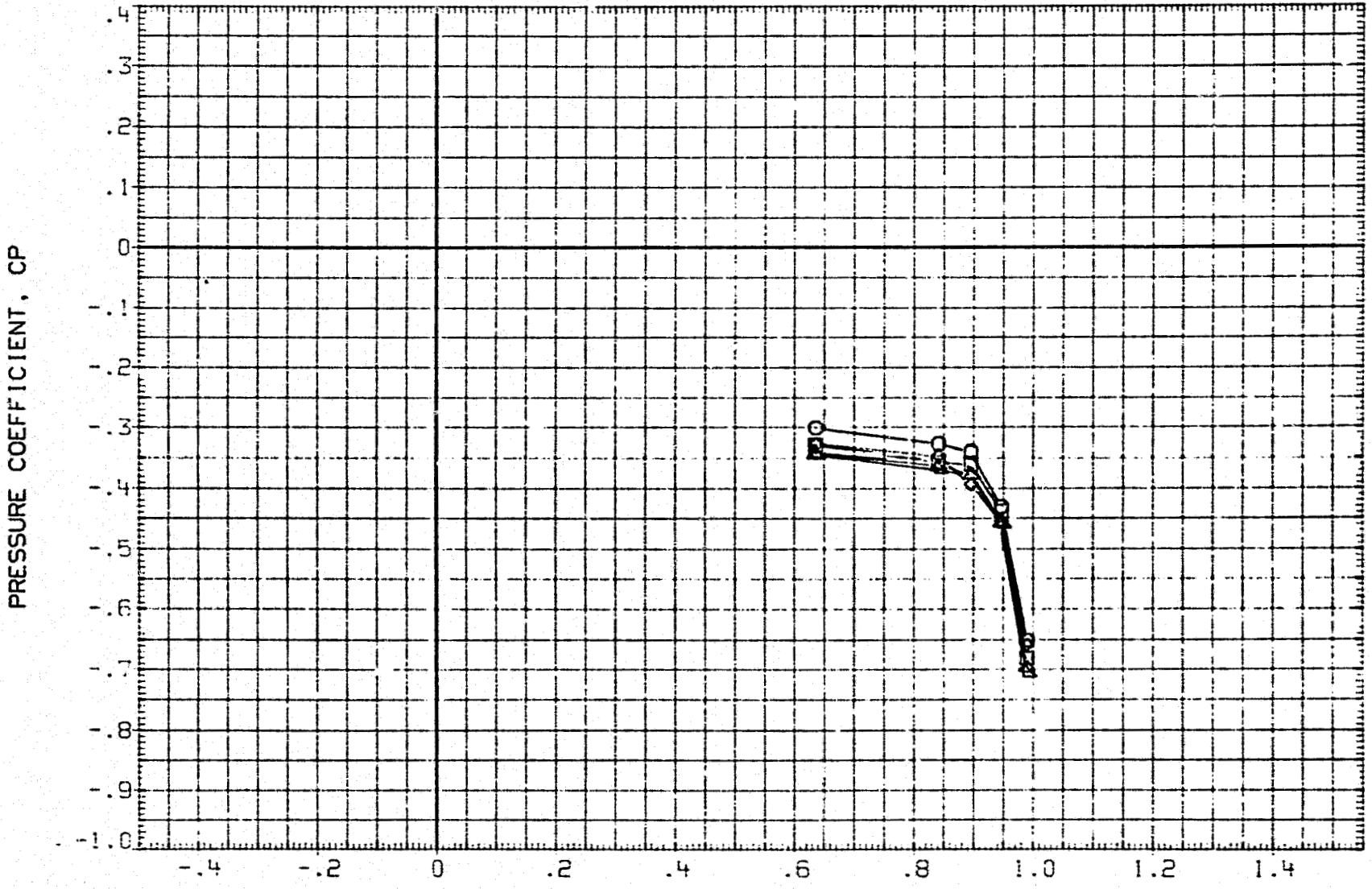



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = 4.000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H20) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H85) | △ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (AE4H80) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .600 | 3.400 |

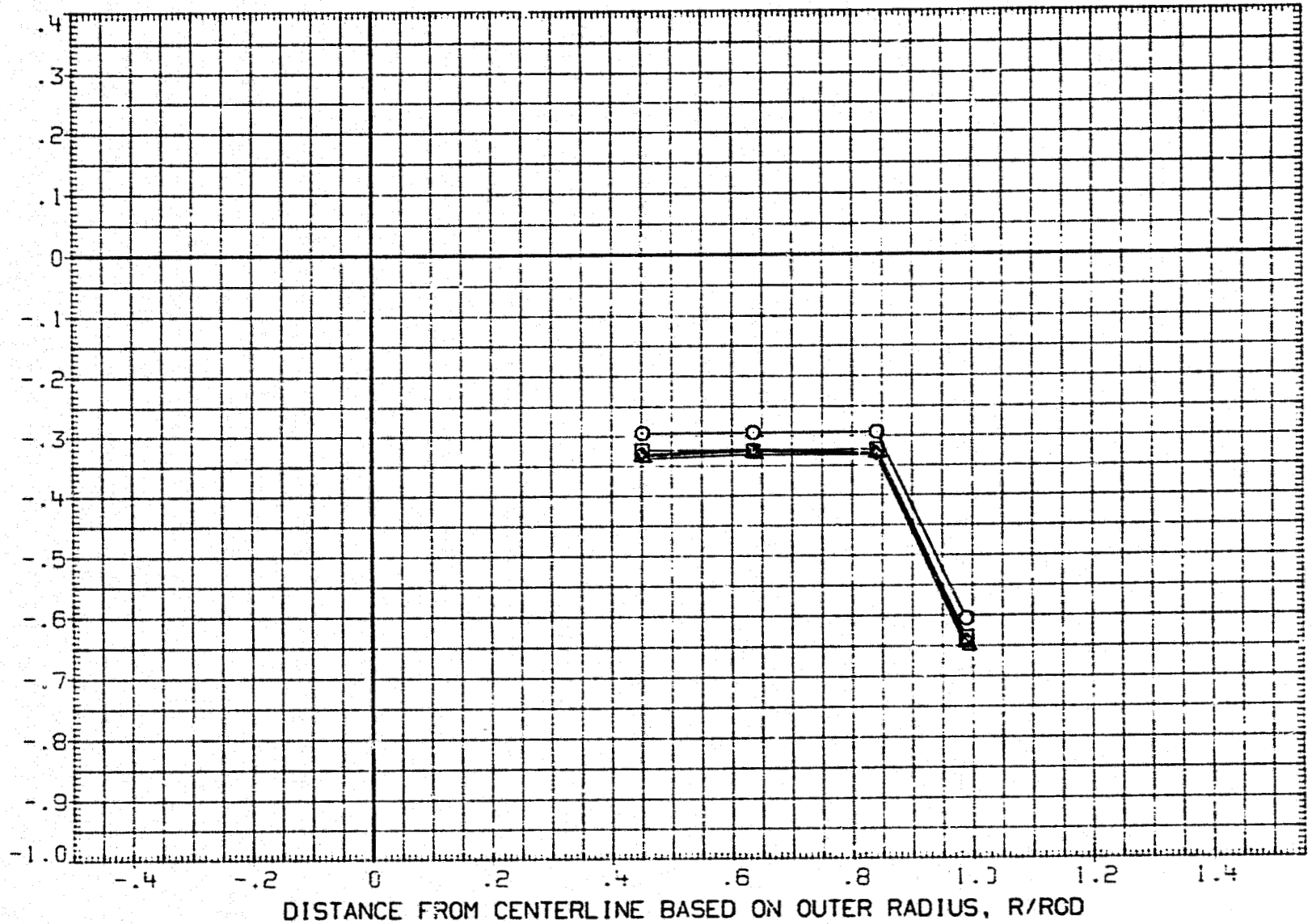



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = 4.000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (BE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H20) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H85) | △ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H80) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | .600 | 3.400 |

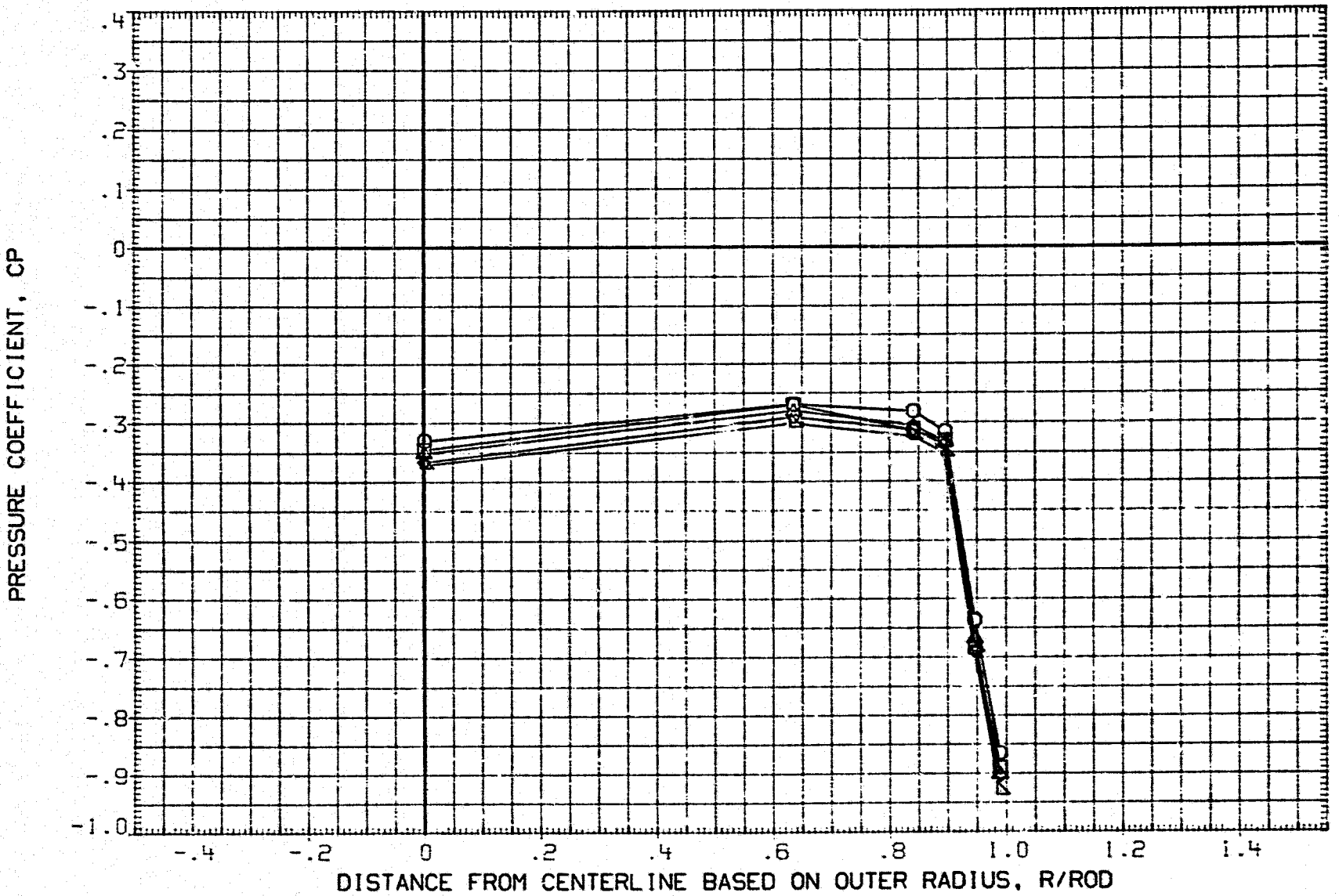



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = -+.000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H20) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H85) | △ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H80) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .600 | 3.400 |

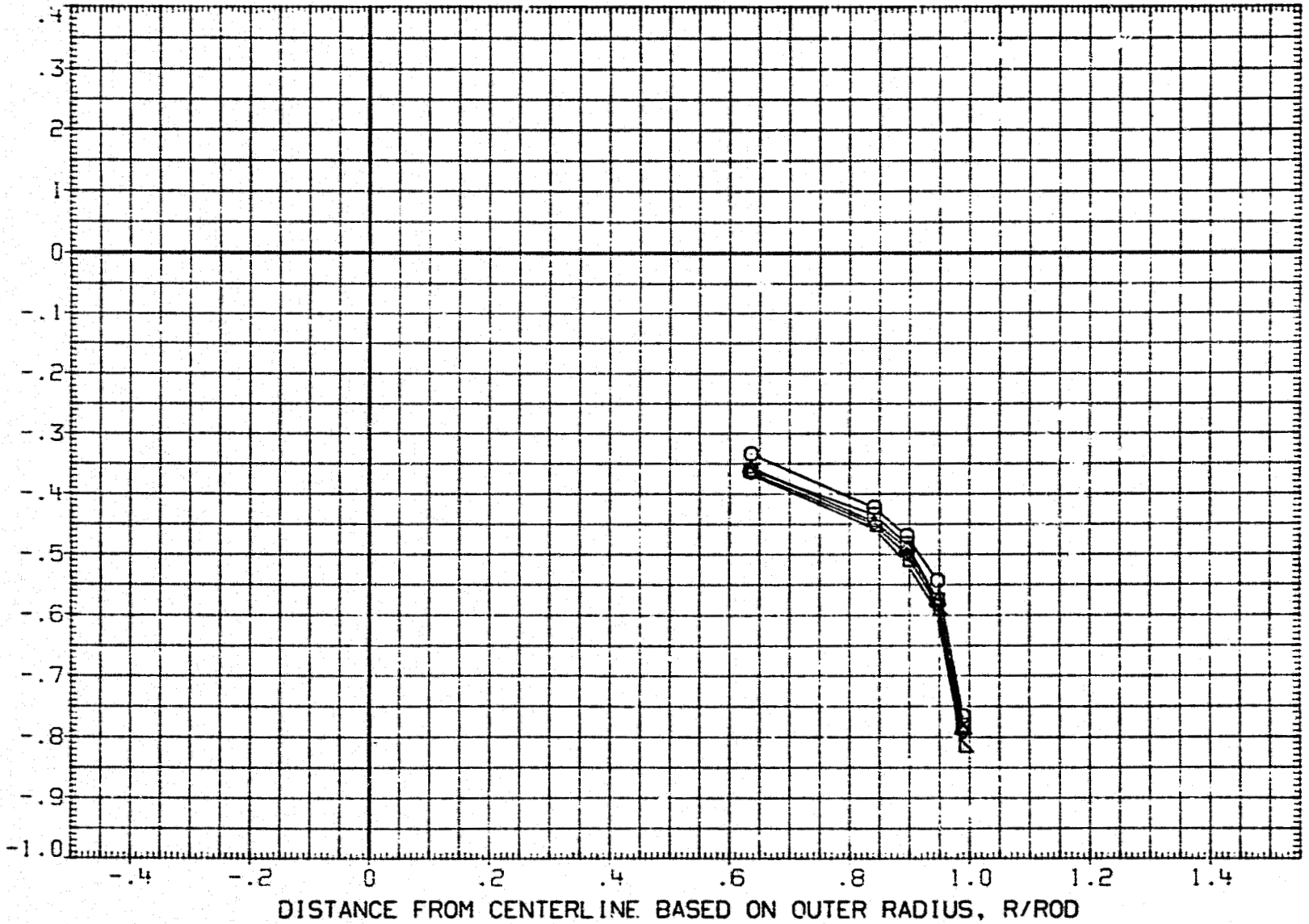



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = -4.000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H20) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N* ) | ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4HB5) | △ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4HB0) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | .600 | 3.400 |

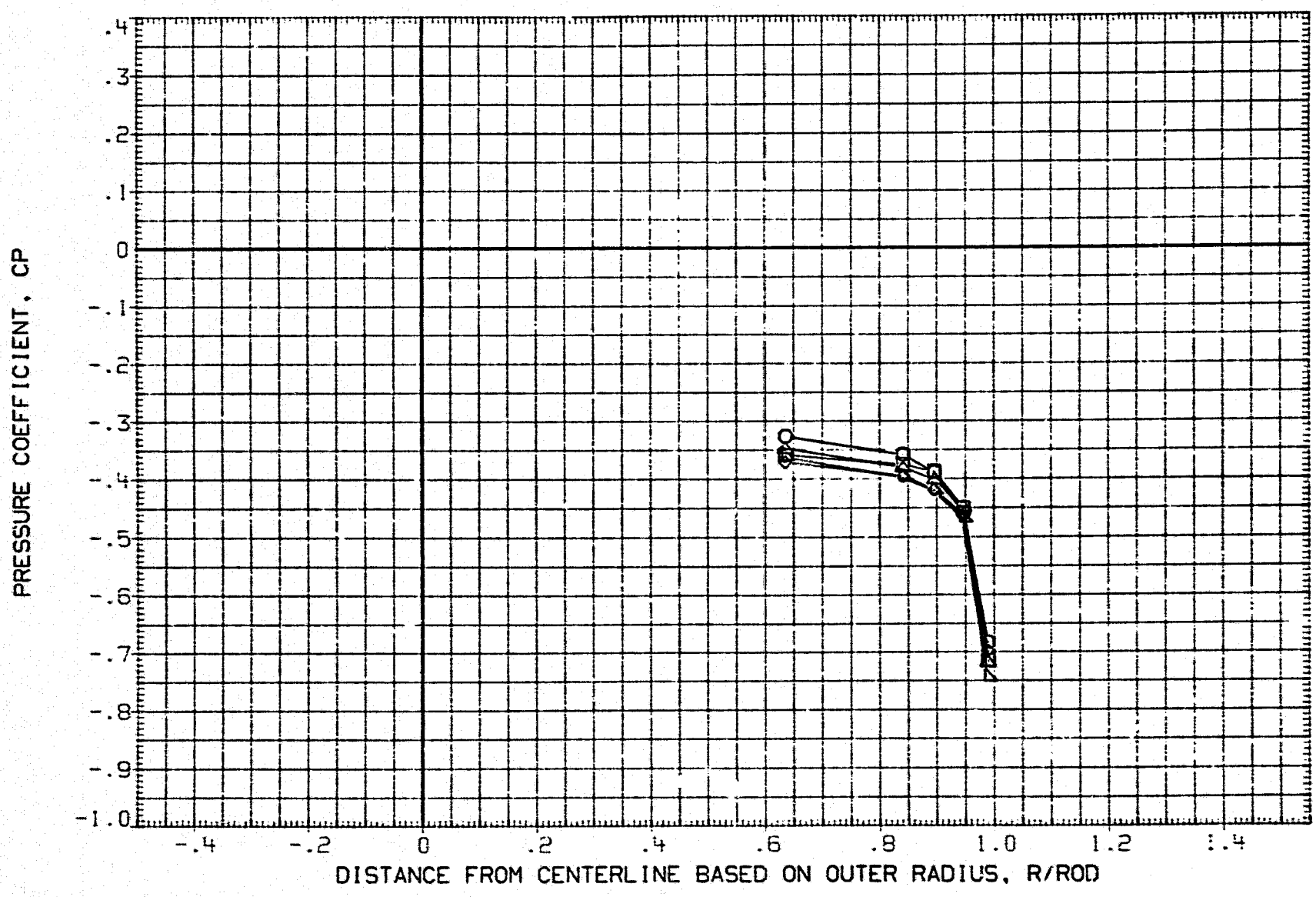



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = -4.000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H28) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H20) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H11) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H85) | △ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H80) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .600 | 3.400 |

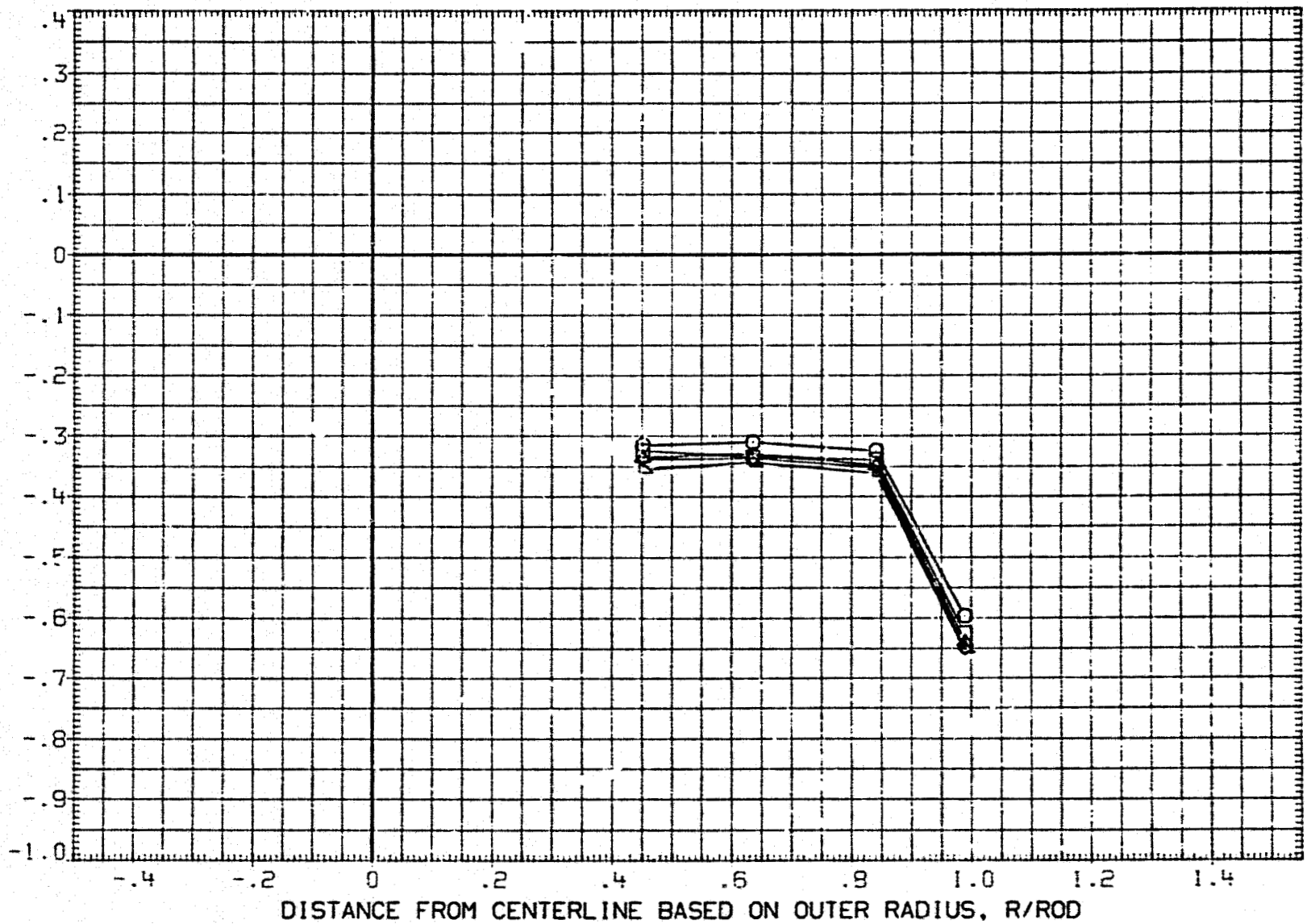



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = -4.000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H28) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H20) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H11) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H85) | △ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H80) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .600 | 3.400 |

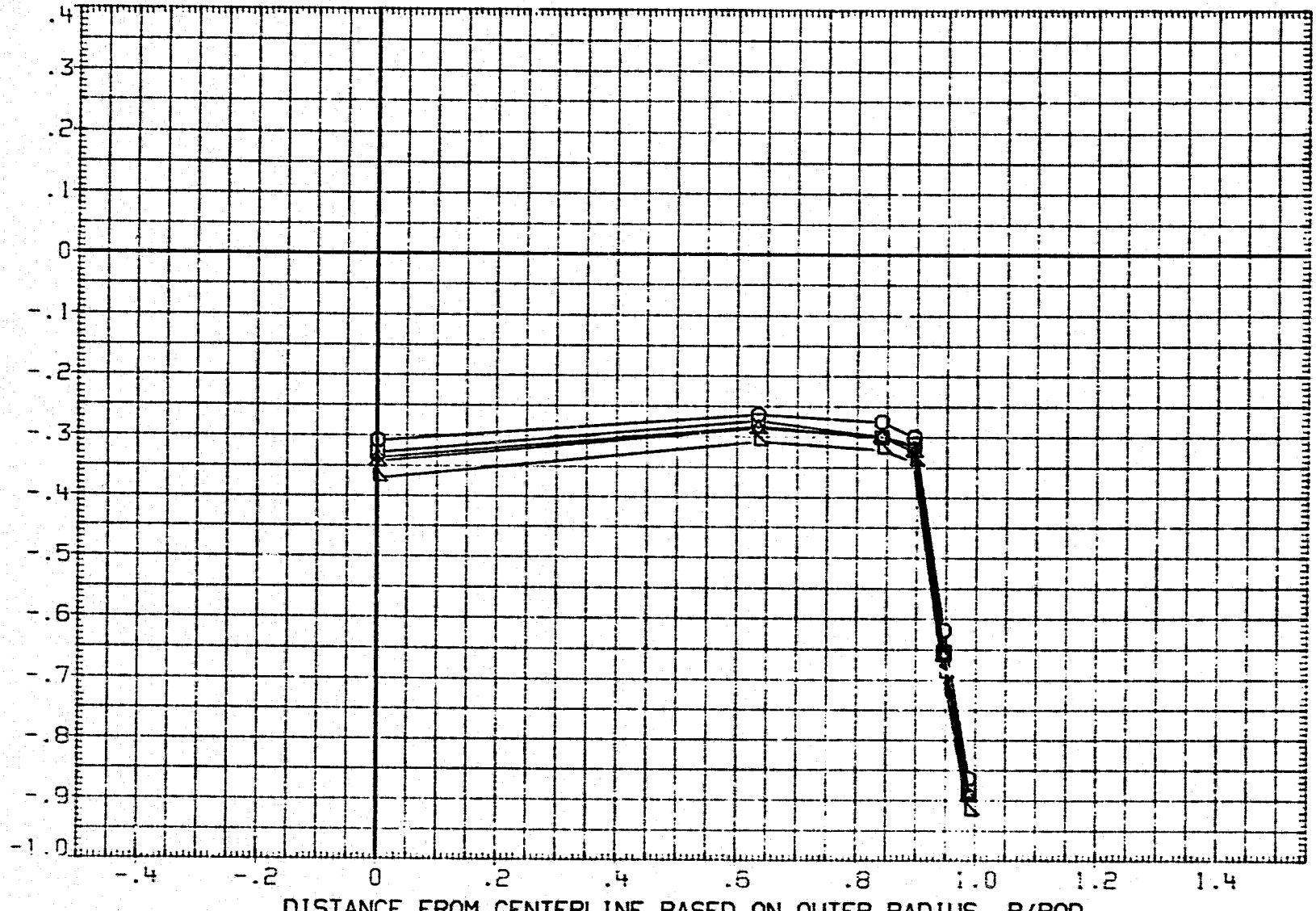



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = 4.000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H28) | ○ | ARC11-023IA80 OTS(SRB-OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H20) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H11) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N• ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H85) | △ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H80) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .600 | 3.400 |

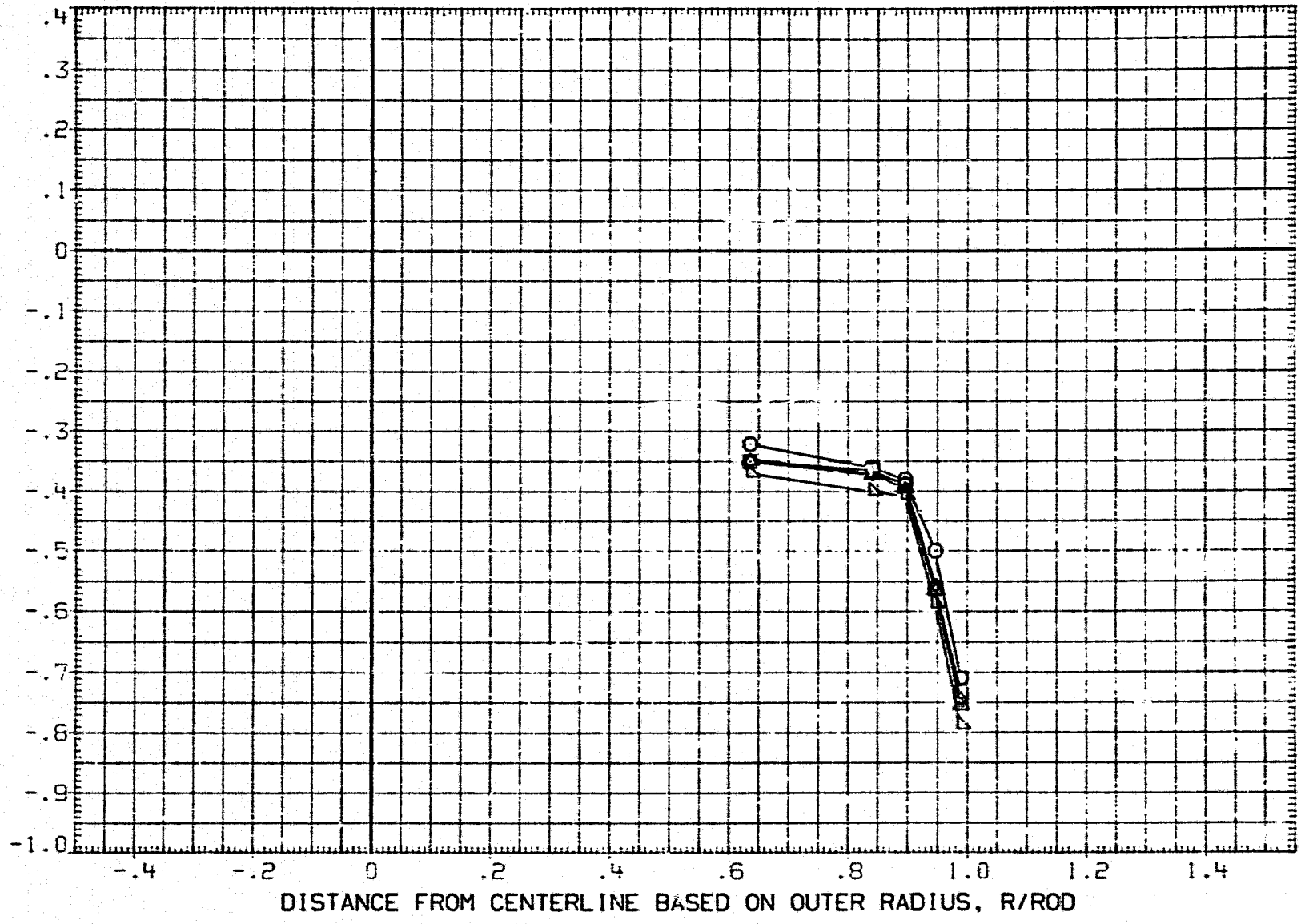



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = 4.000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H28) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H20) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H11) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4HB5) | △ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4HB0) | ▽ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .600 | 3.400 |

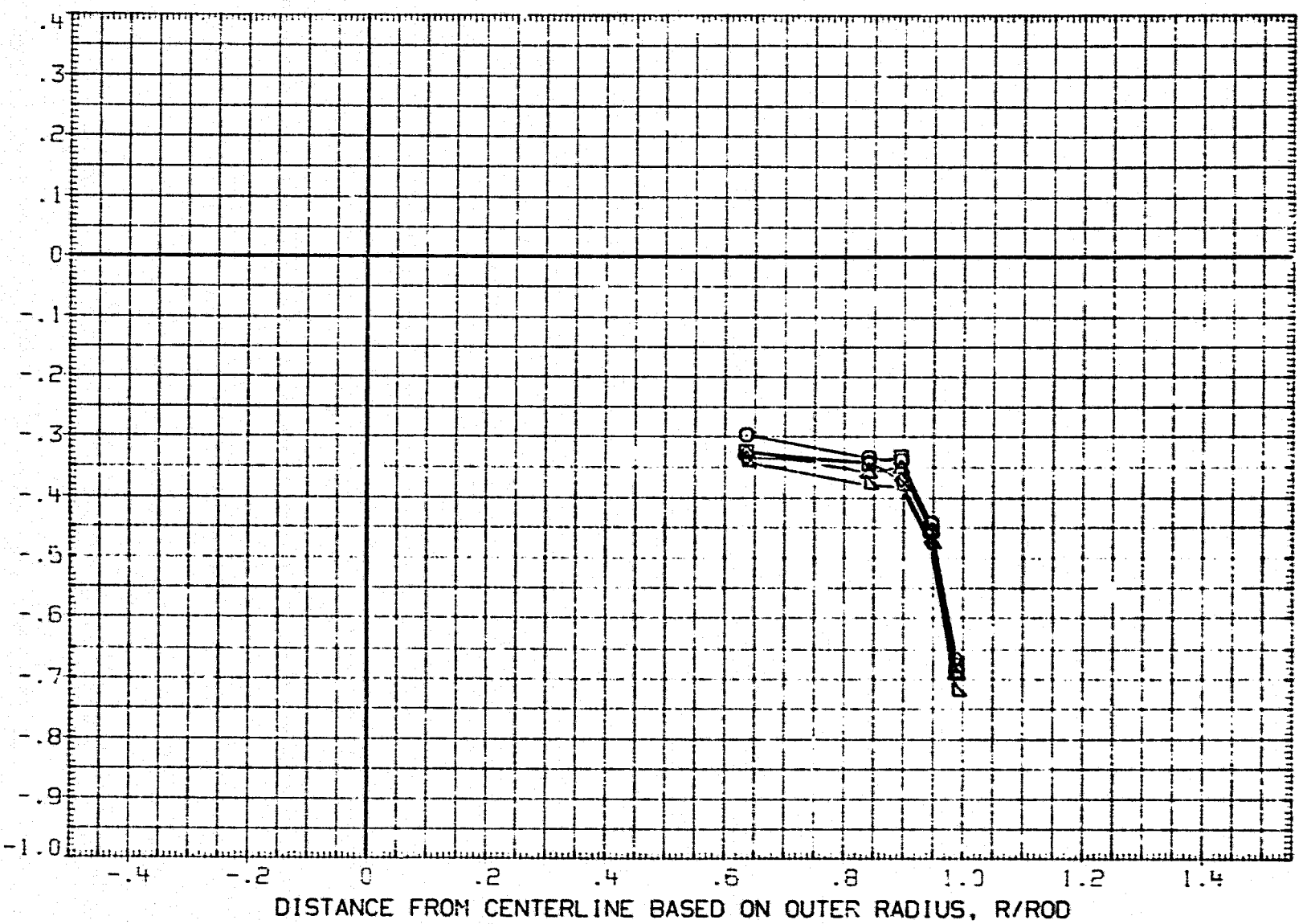



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = 4.000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H28) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H20) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H11) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H85) | △ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .600 | 3.400 |
| (BE4H80) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .600 | 3.400 |

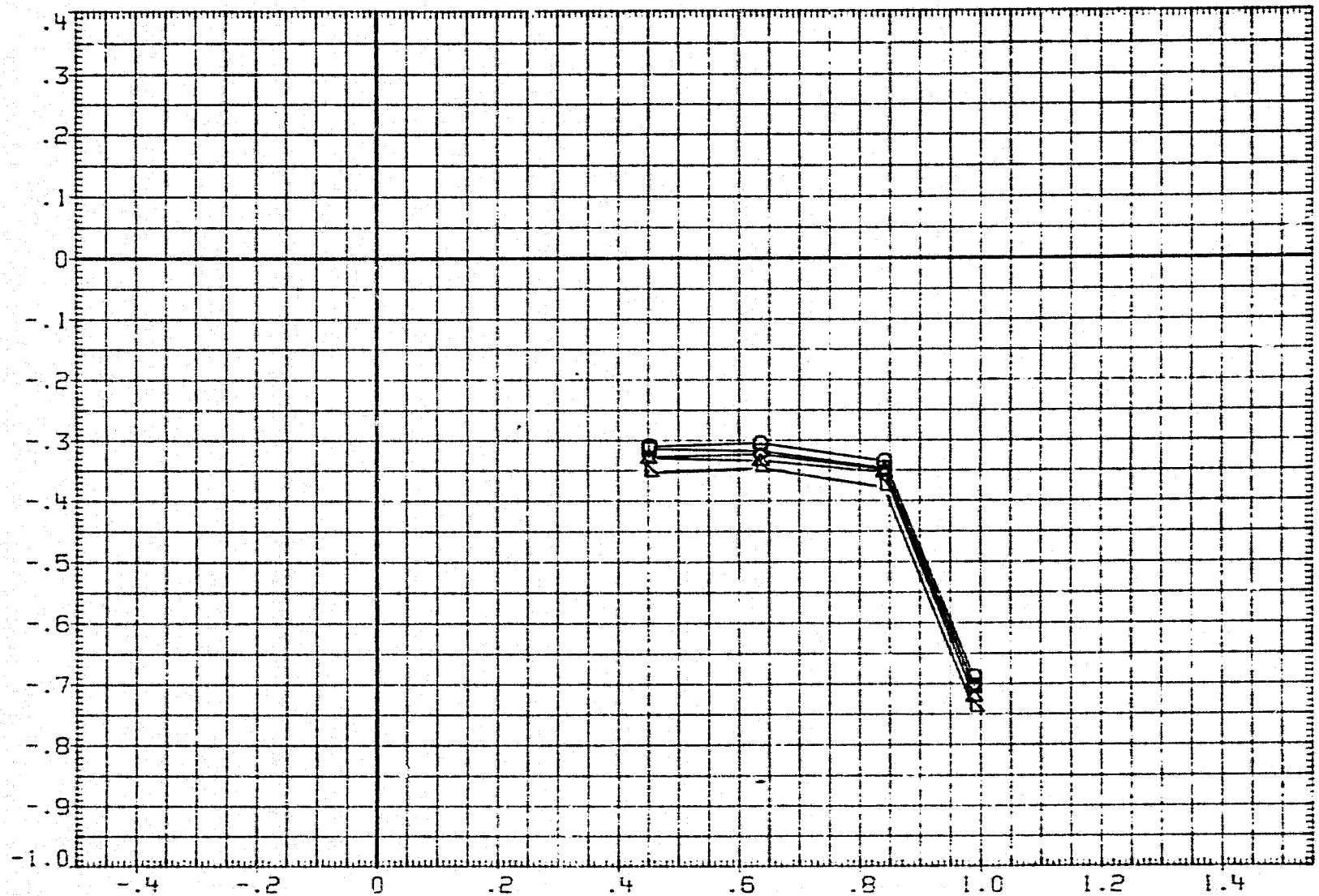



FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = 4.000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H86) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H81) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .900 | 4.250 |

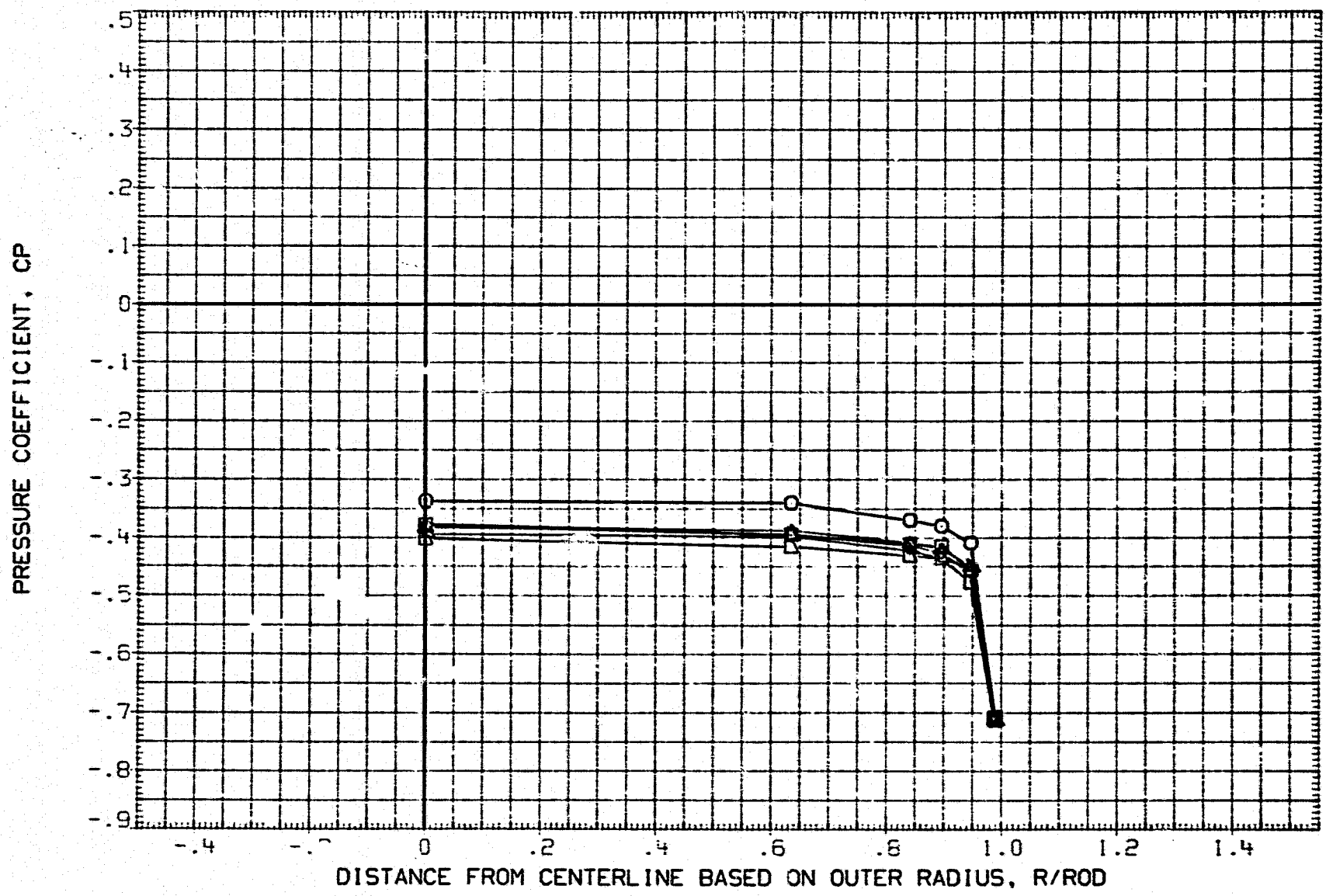



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = -4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-023IA8D OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-023IA8D OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-023IA8D OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-023IA8D OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H86) | ▷ | ARC11-023IA8D OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H81) | D | ARC11-023IA8D OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .900 | 4.250 |

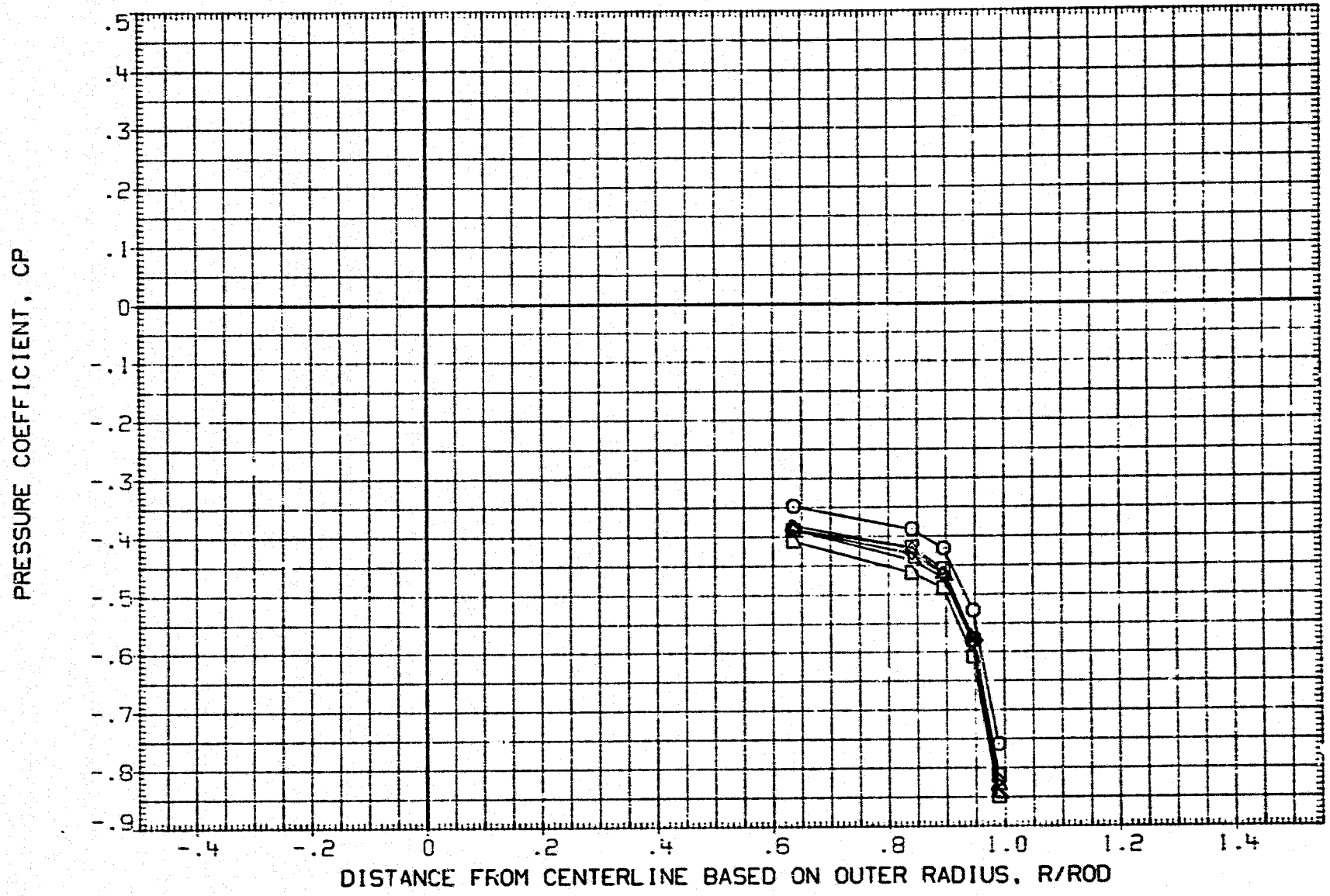



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = -4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H86) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H81) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .900 | 4.250 |

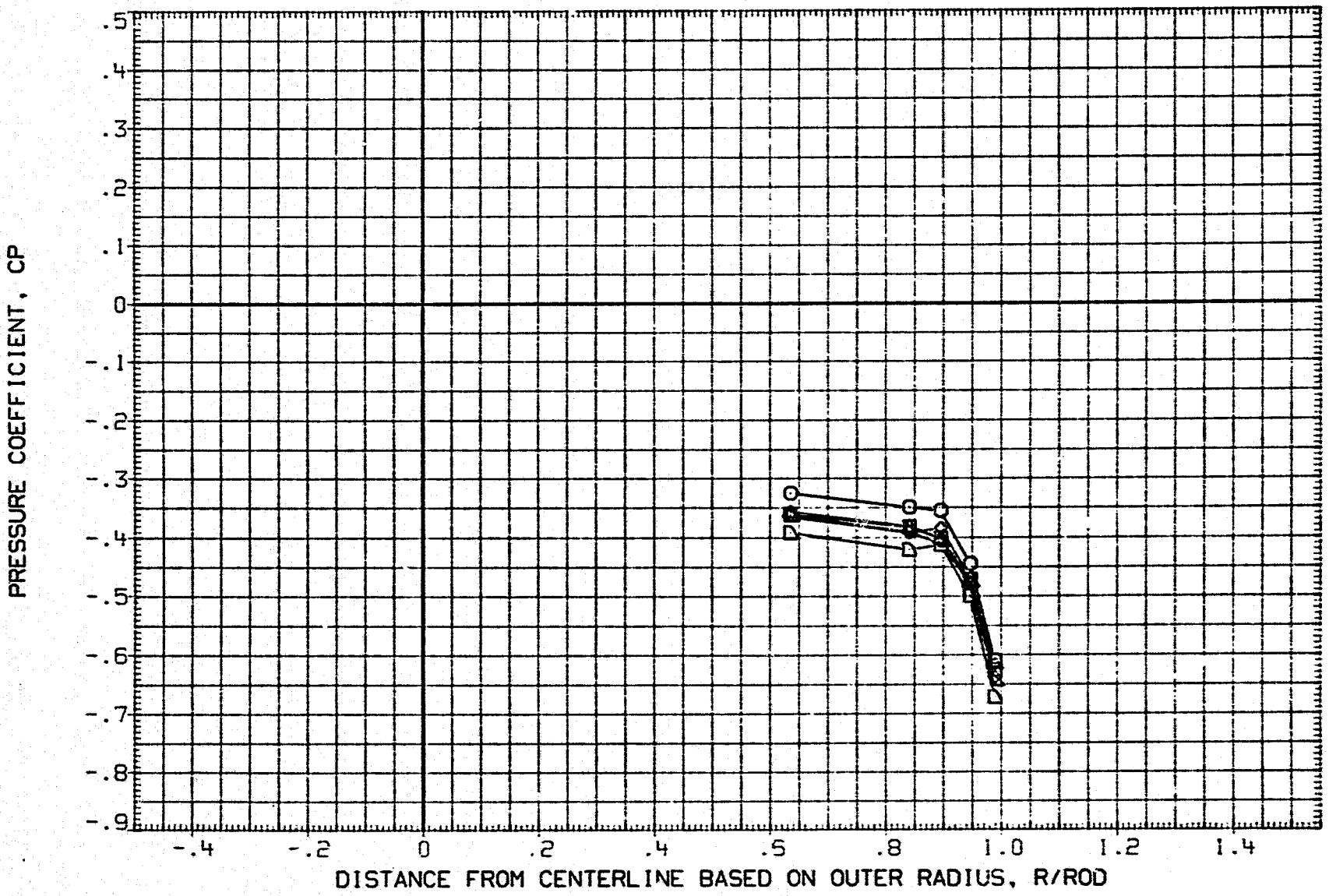



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = -4.000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H86) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H81) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |

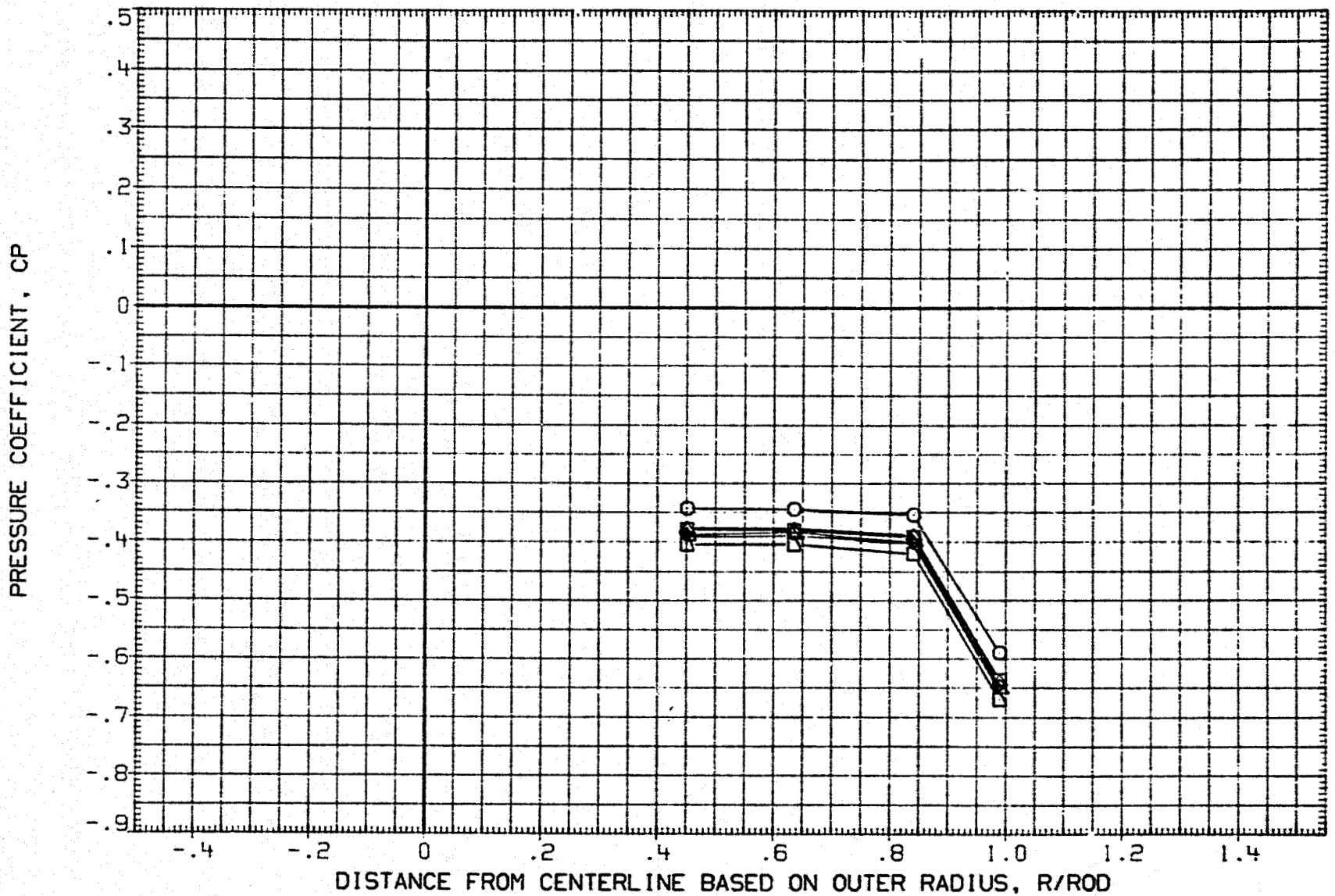



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = -4.000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H86) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H81) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .300 | 4.250 |

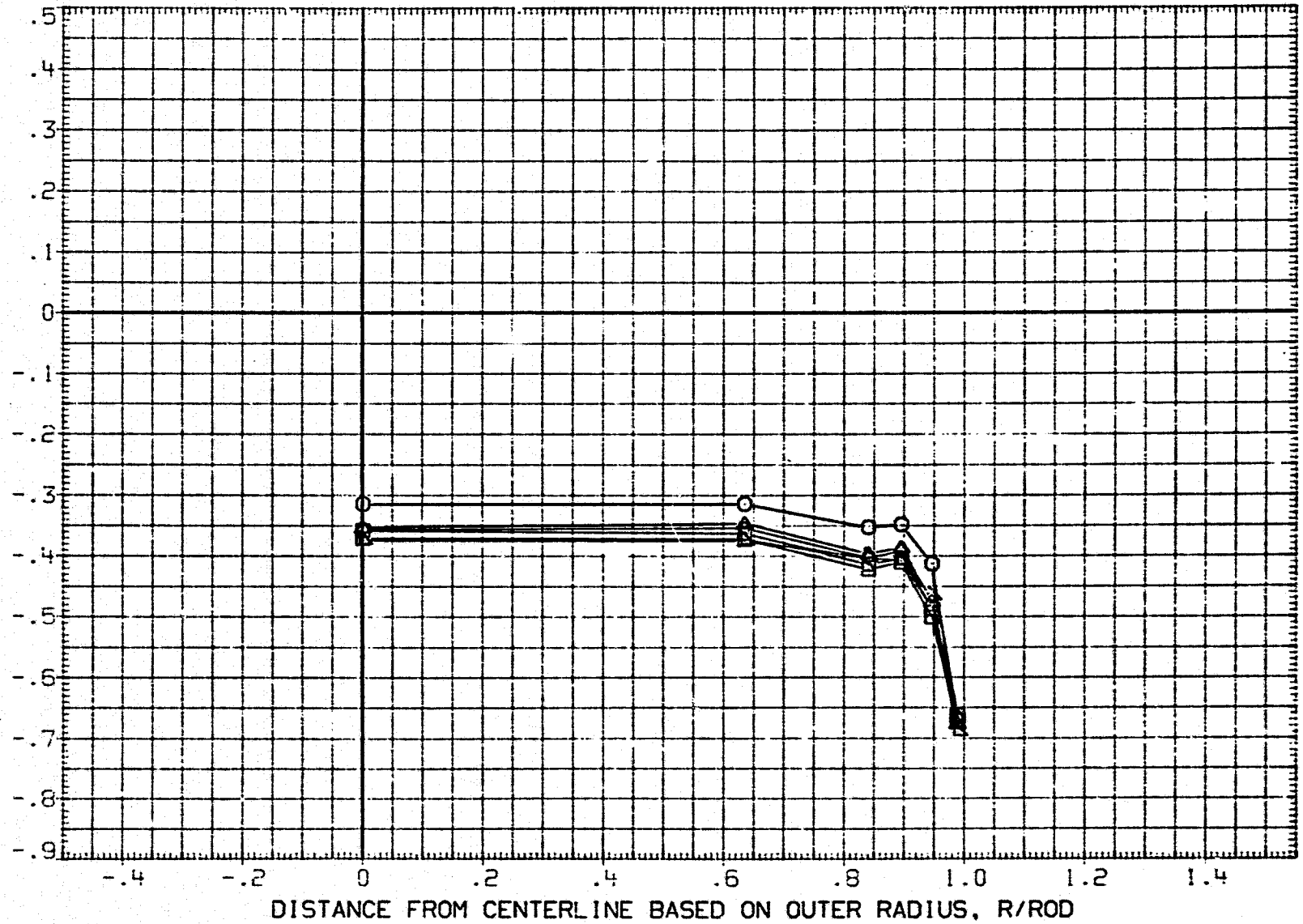



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4HB6) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4HB1) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |

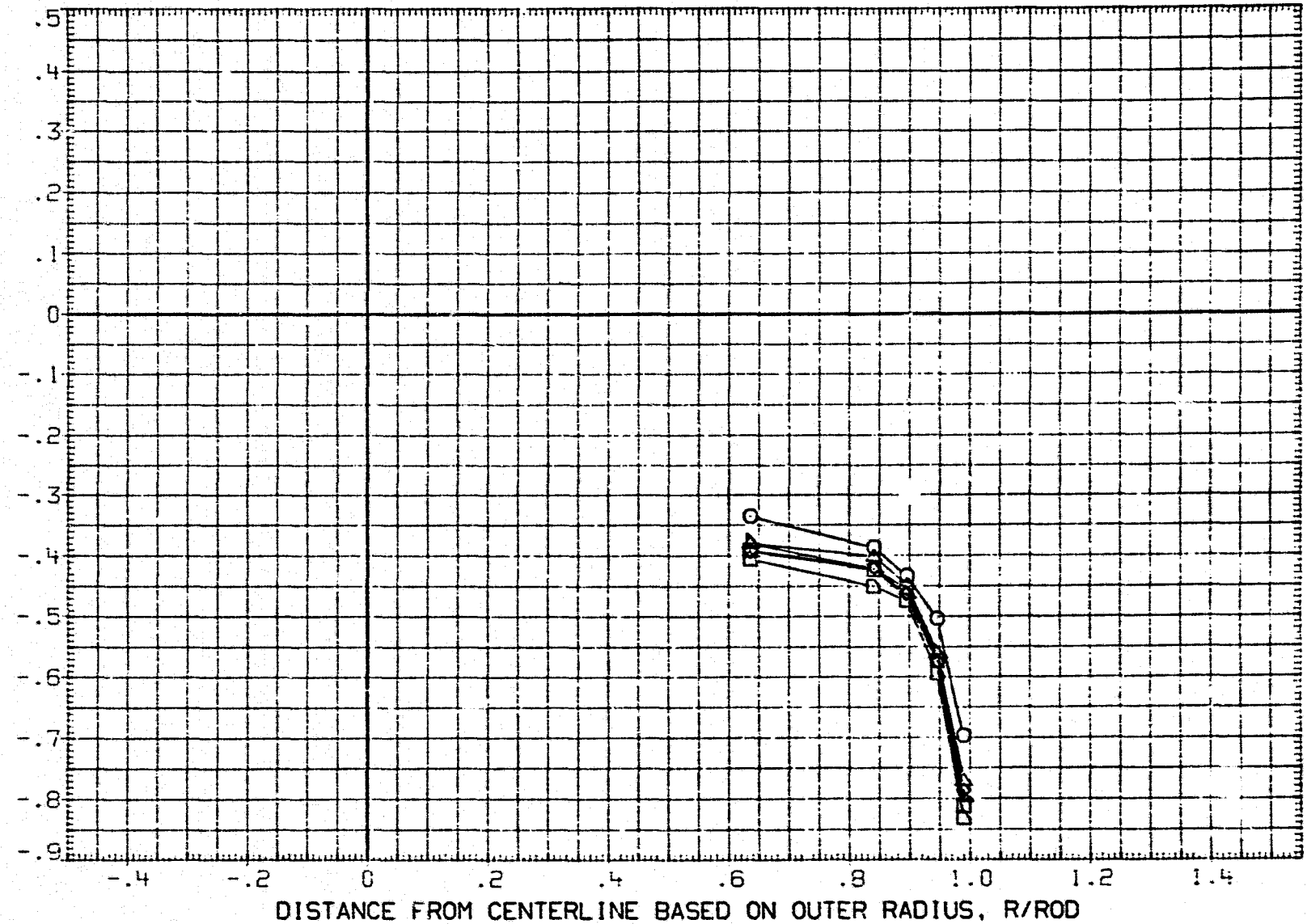



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H17) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AL4H86) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H81) | D | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |

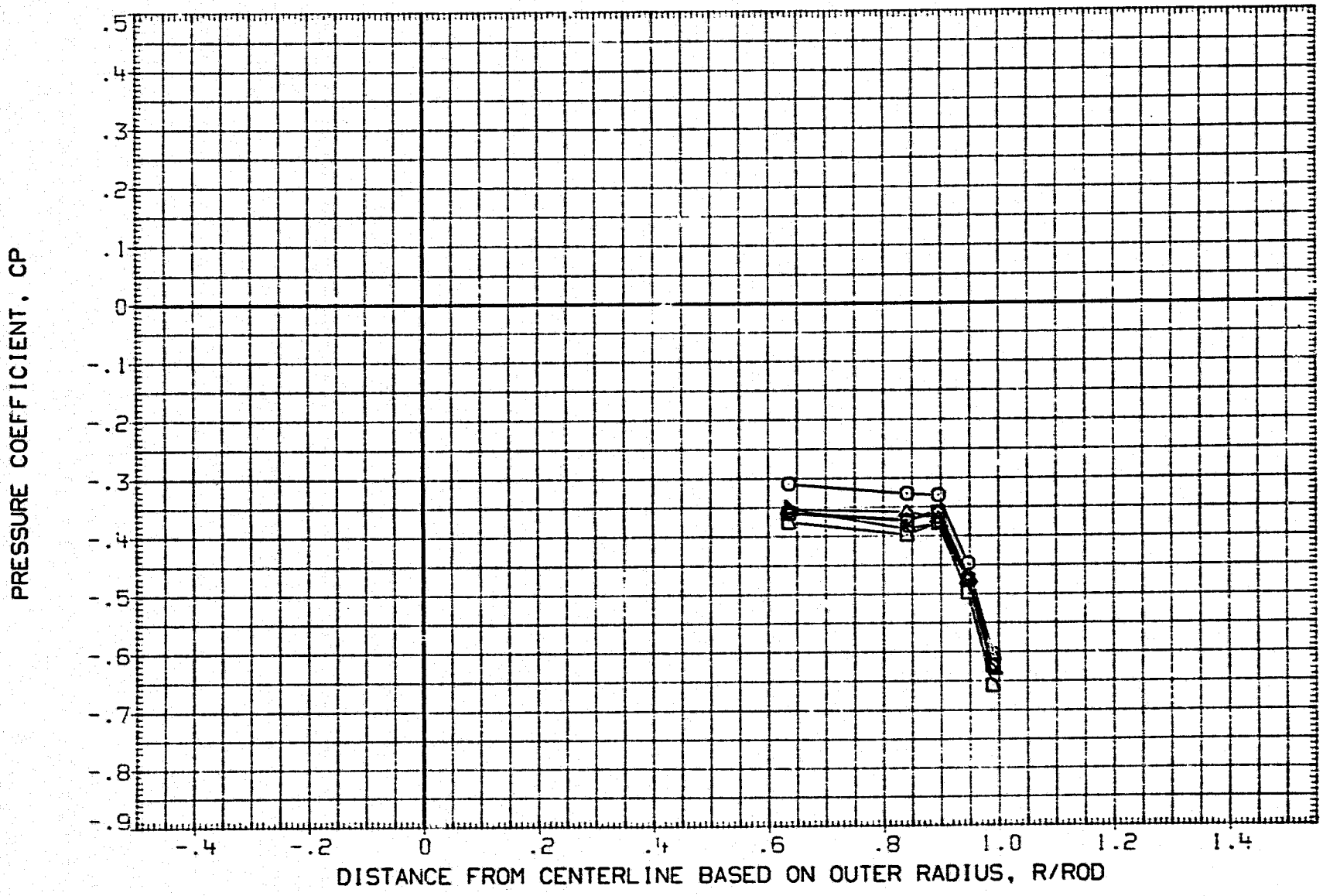



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4HB6) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4HB1) | D | ARC11-0231A80 OTS(SRB-N ORB NO.2 OUT)ET BASE | .000 | .000 | .900 | 4.250 |

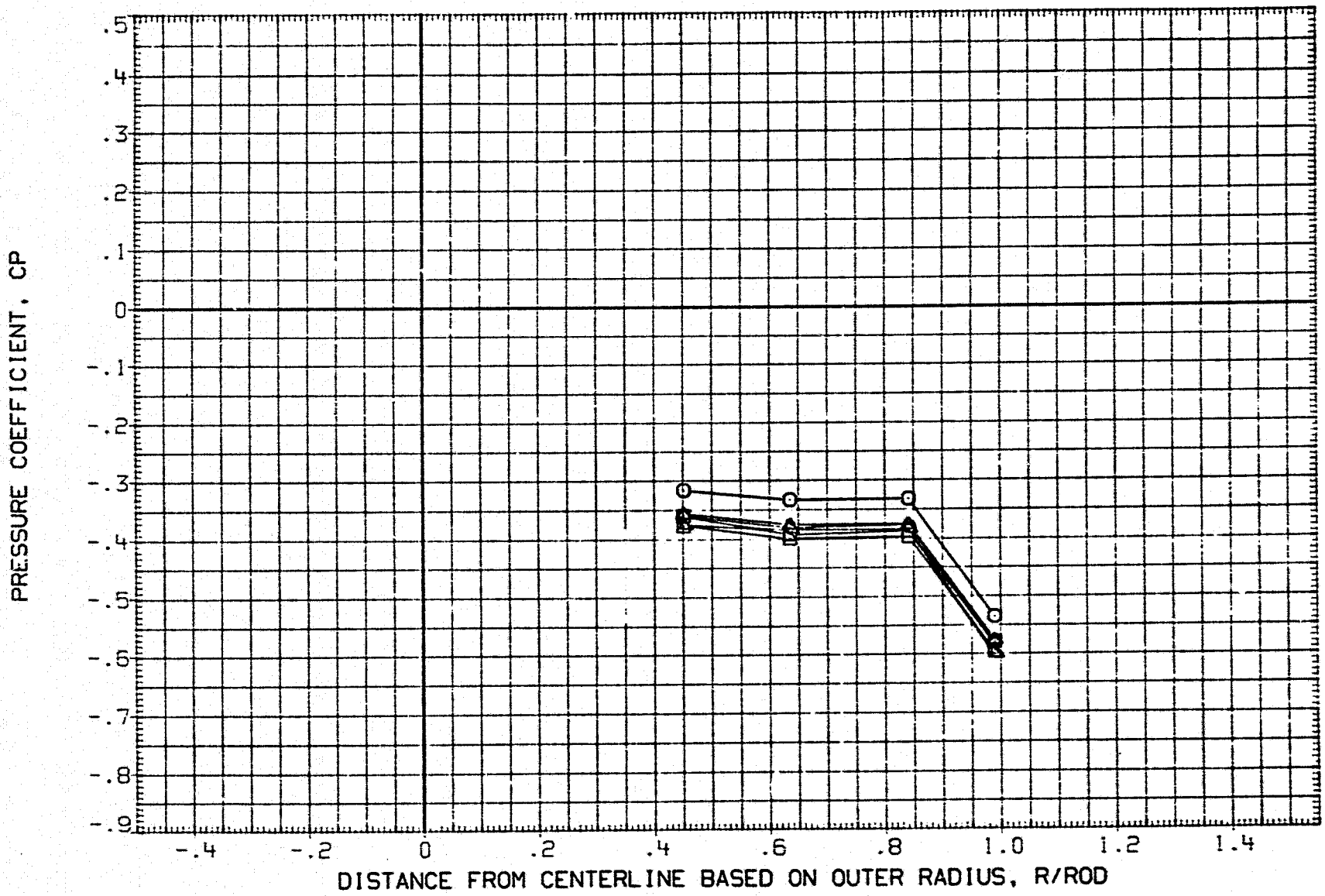



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H35) | ◁ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H31) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .900 | 4.250 |

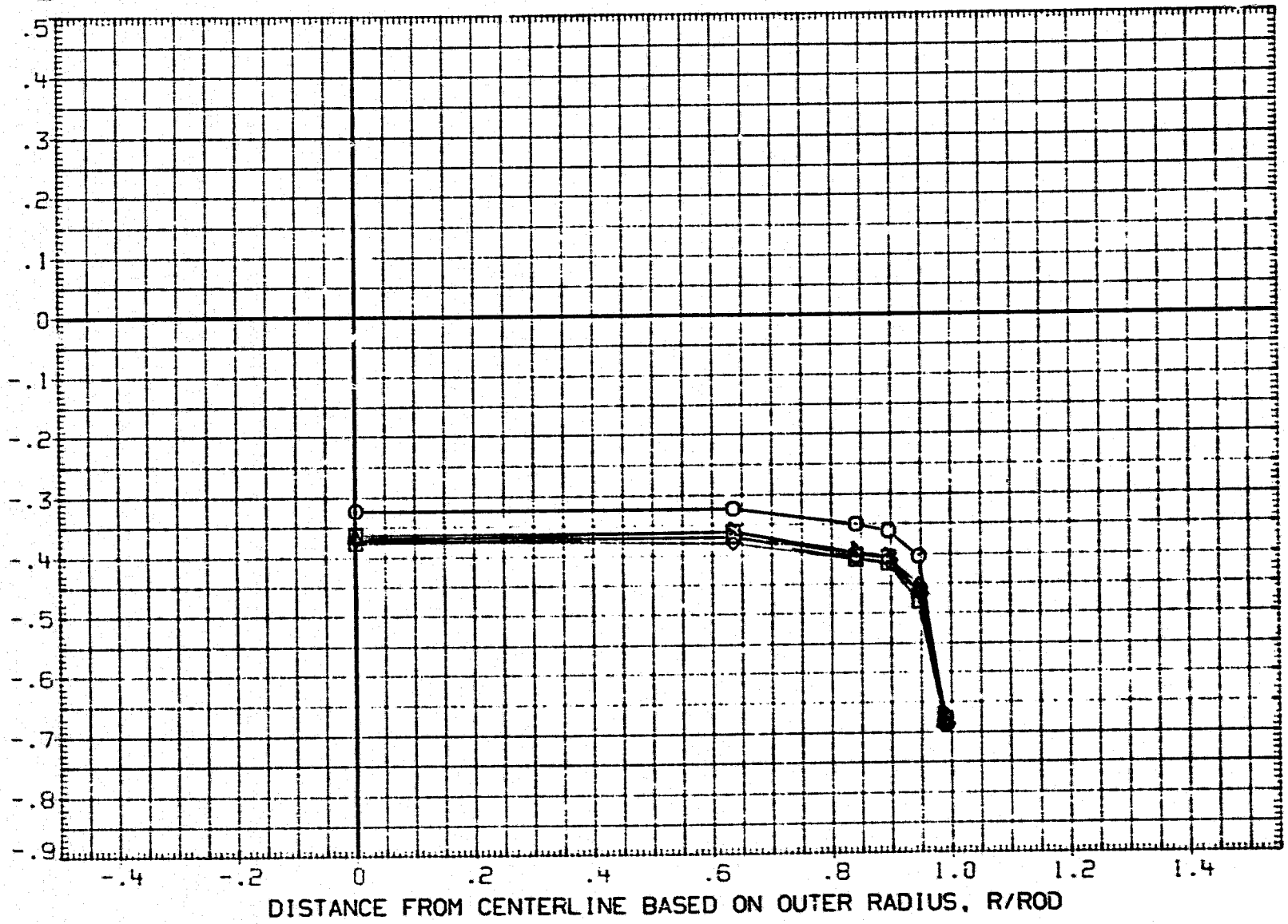



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = 4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H86) | ◁ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H81) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .900 | 4.250 |

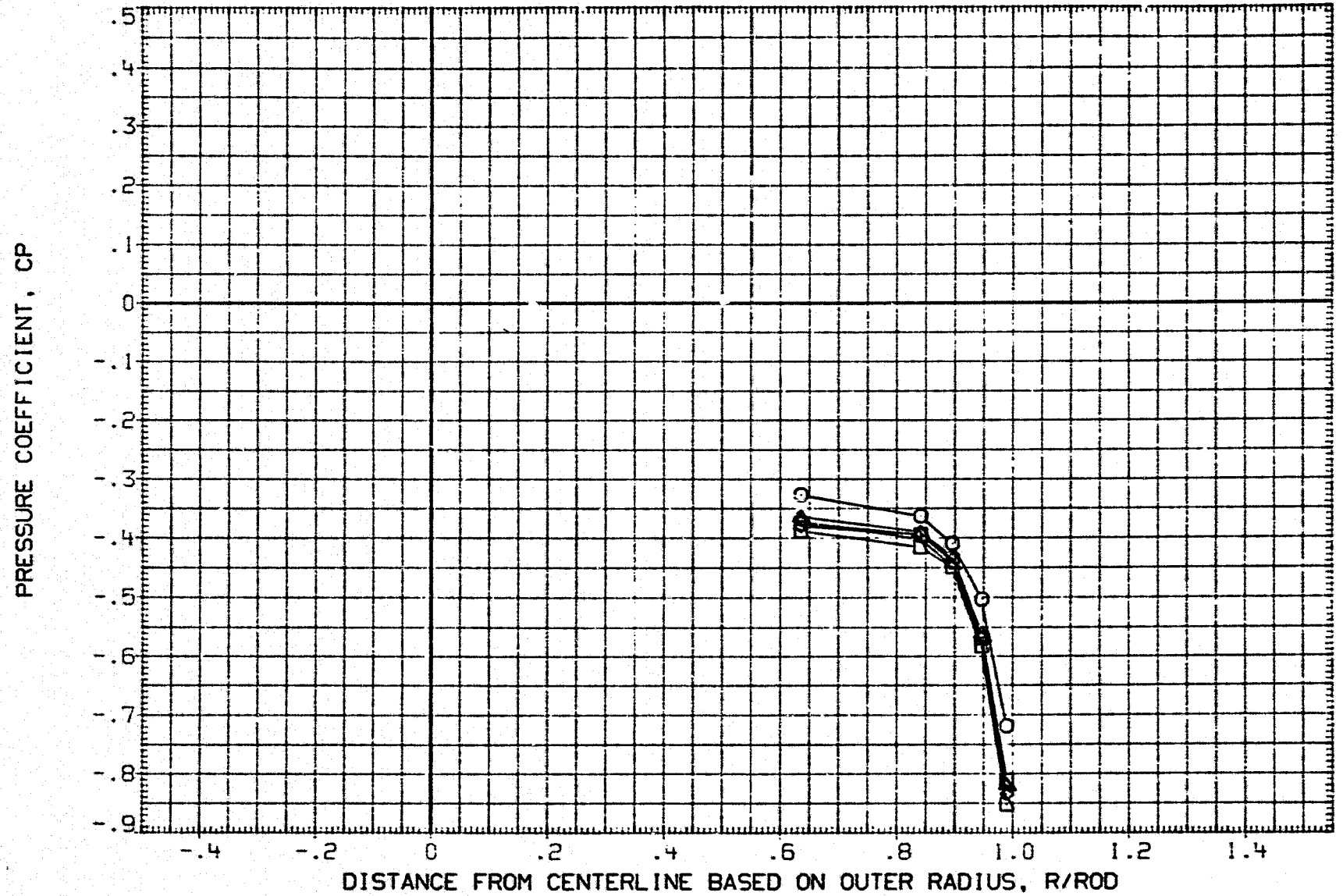



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = 4.000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H86) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H81) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT) ET BASE | .000 | .000 | .900 | 4.250 |

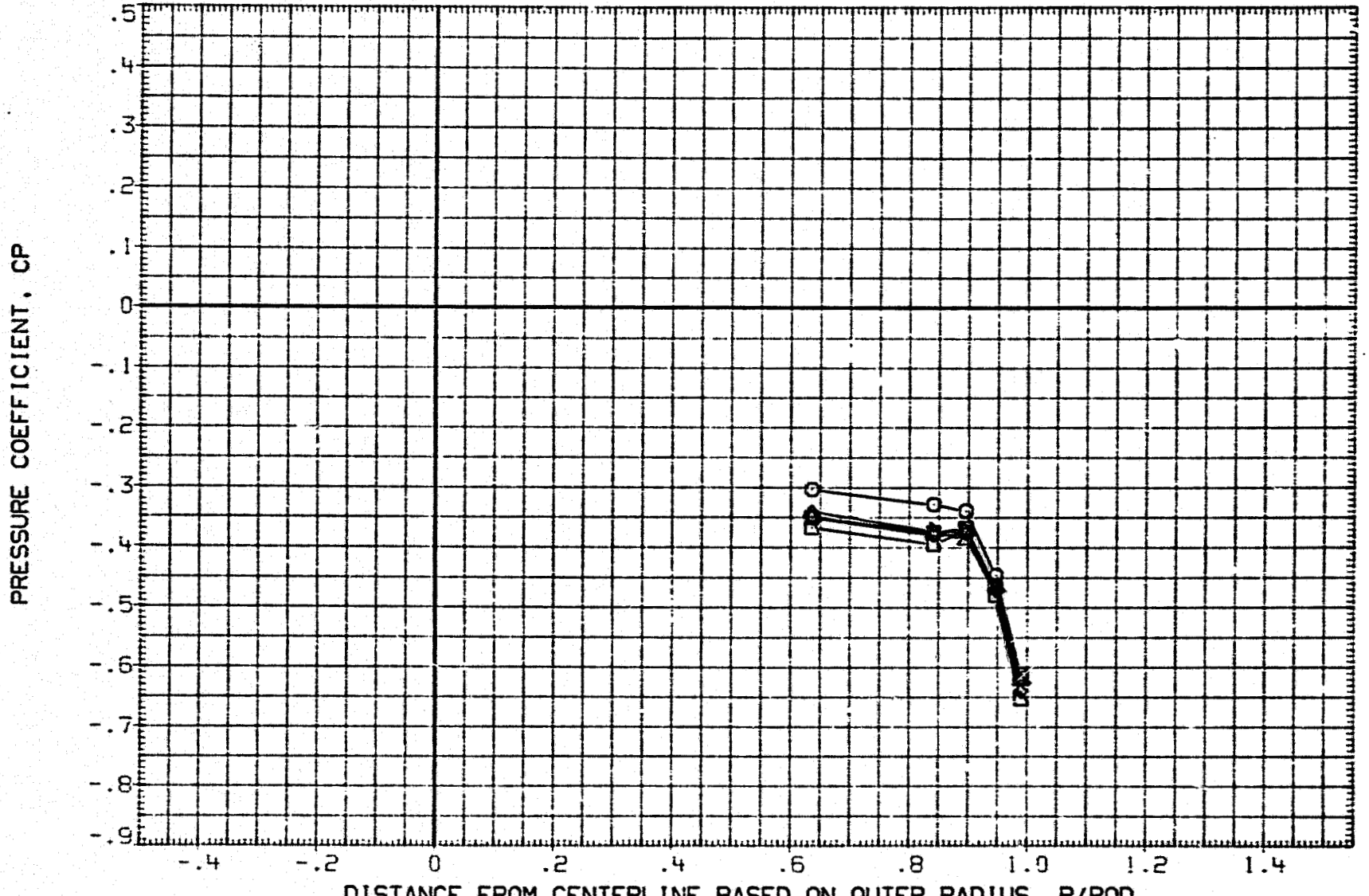



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = 4.000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H56) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTJET BASE | .000 | .000 | .900 | 4.250 |
| (AE4H81) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTJET BASE | .000 | .000 | .900 | 4.250 |

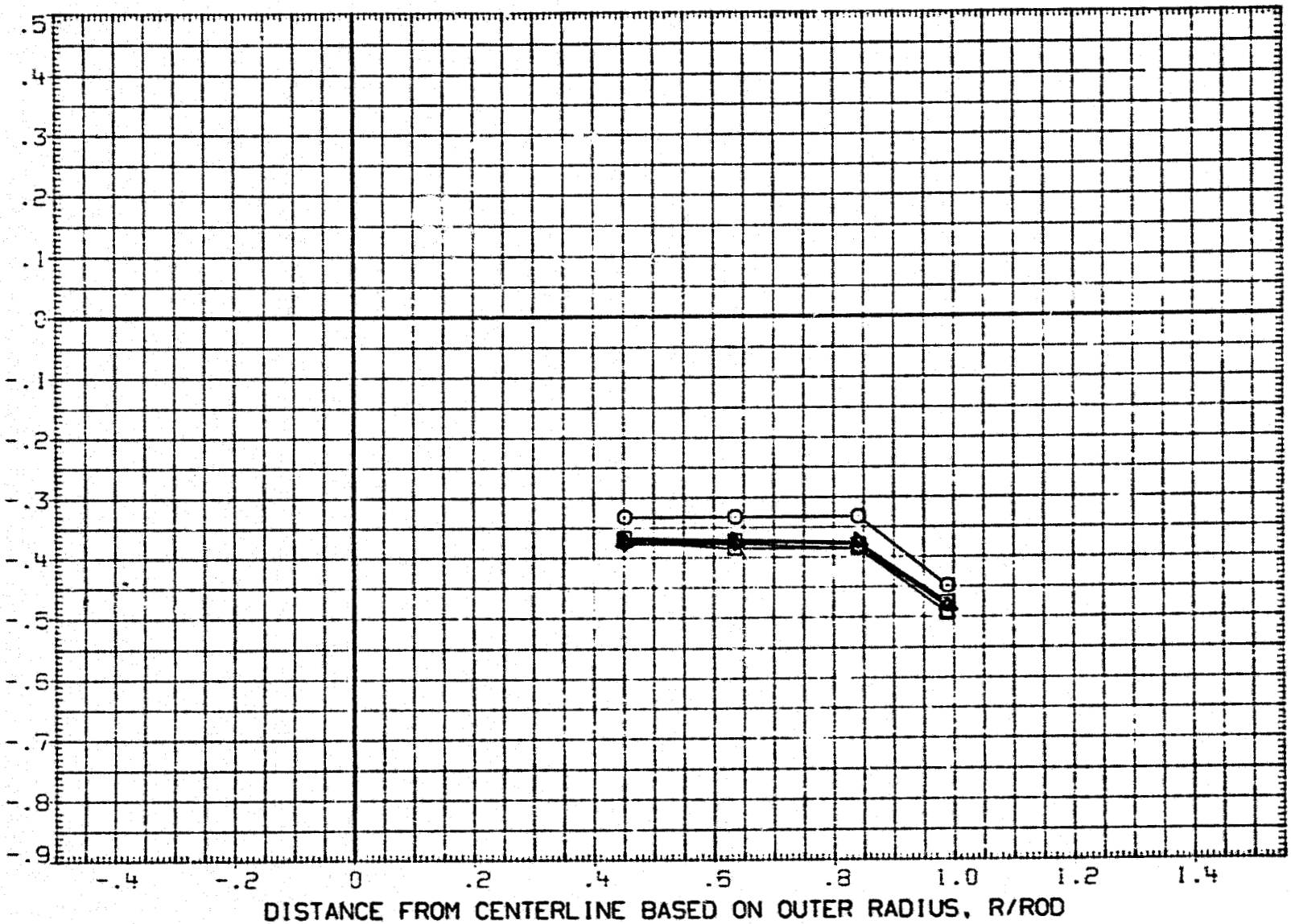



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = 4.000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N• ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H36) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H31) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |

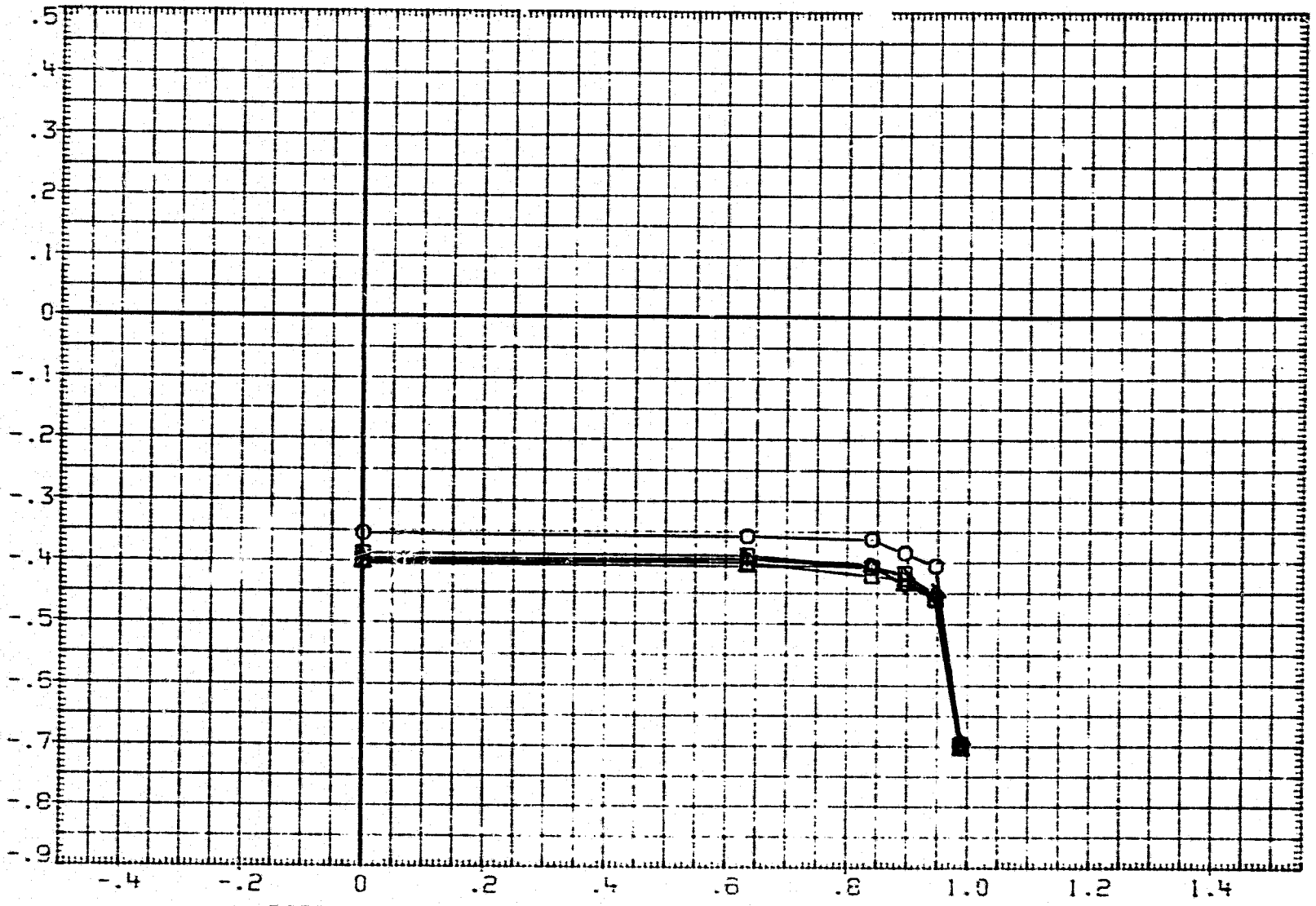



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = -4.000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H29) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H21) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H16) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H12) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4HB6) | ⊏ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H81) | D | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT) ET BASE | .000 | .000 | .900 | 4.250 |

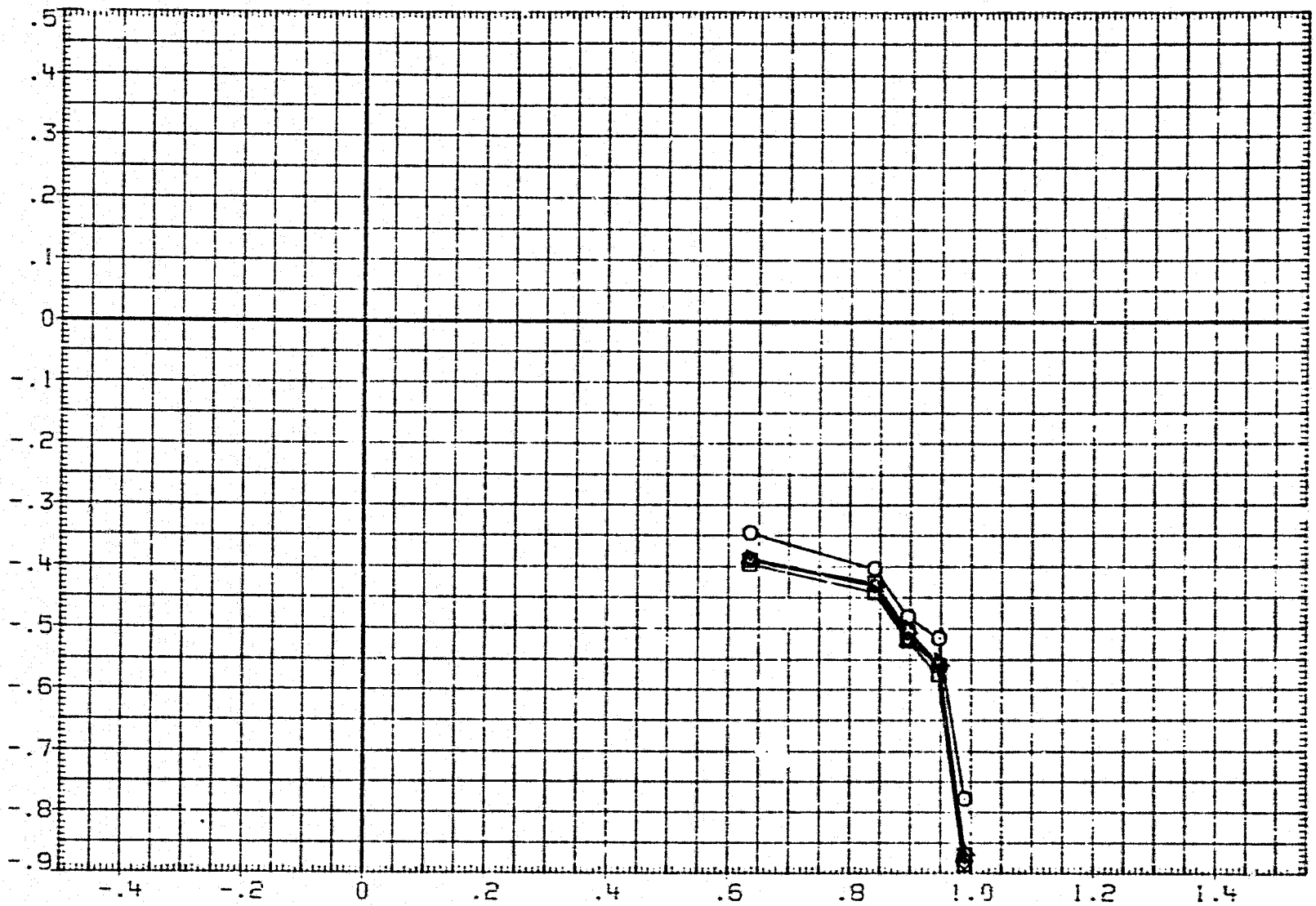



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = -4.000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OE | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H29) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H21) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H16) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H12) | △ | APC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4HB6) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4HB1) | D | ARC11-023IA80 OTS(SRB-N ORB NO.2 OUT) ET BASE | .000 | .000 | .900 | 4.250 |

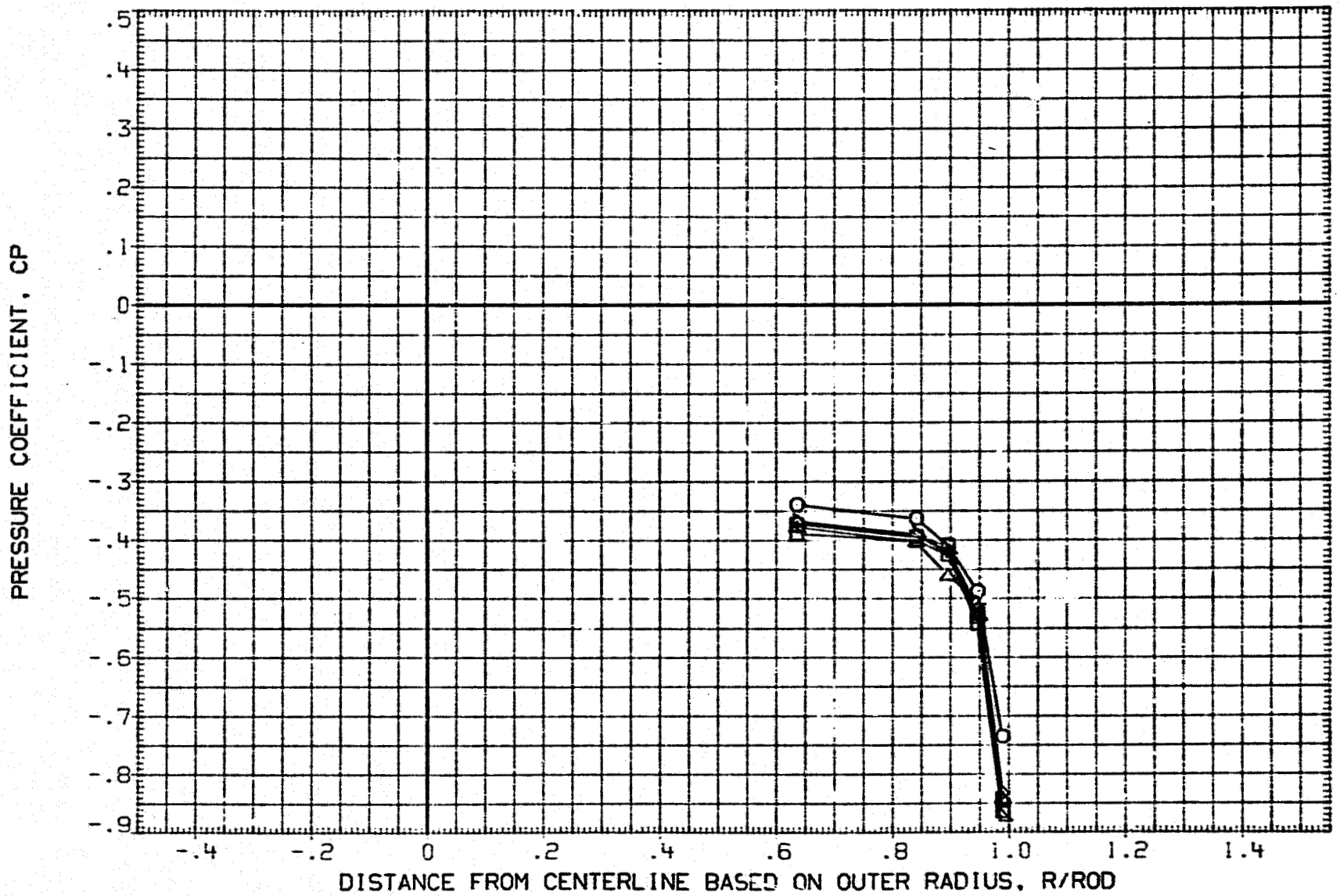



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = -4.000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (BE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H21) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H12) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H86) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H81) | □ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |

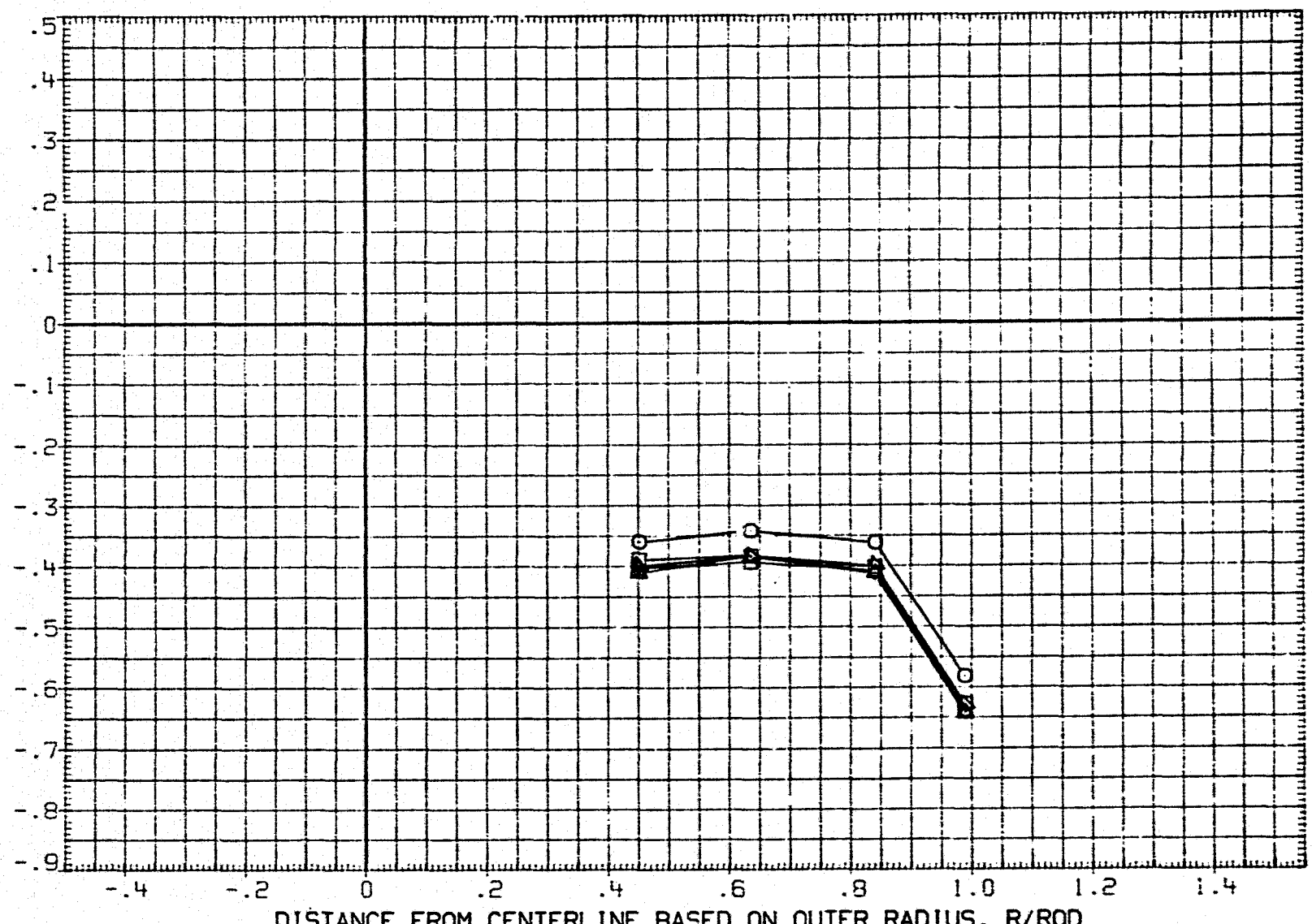



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = -4.000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (BE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H21) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H12) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H06) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H81) | D | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |

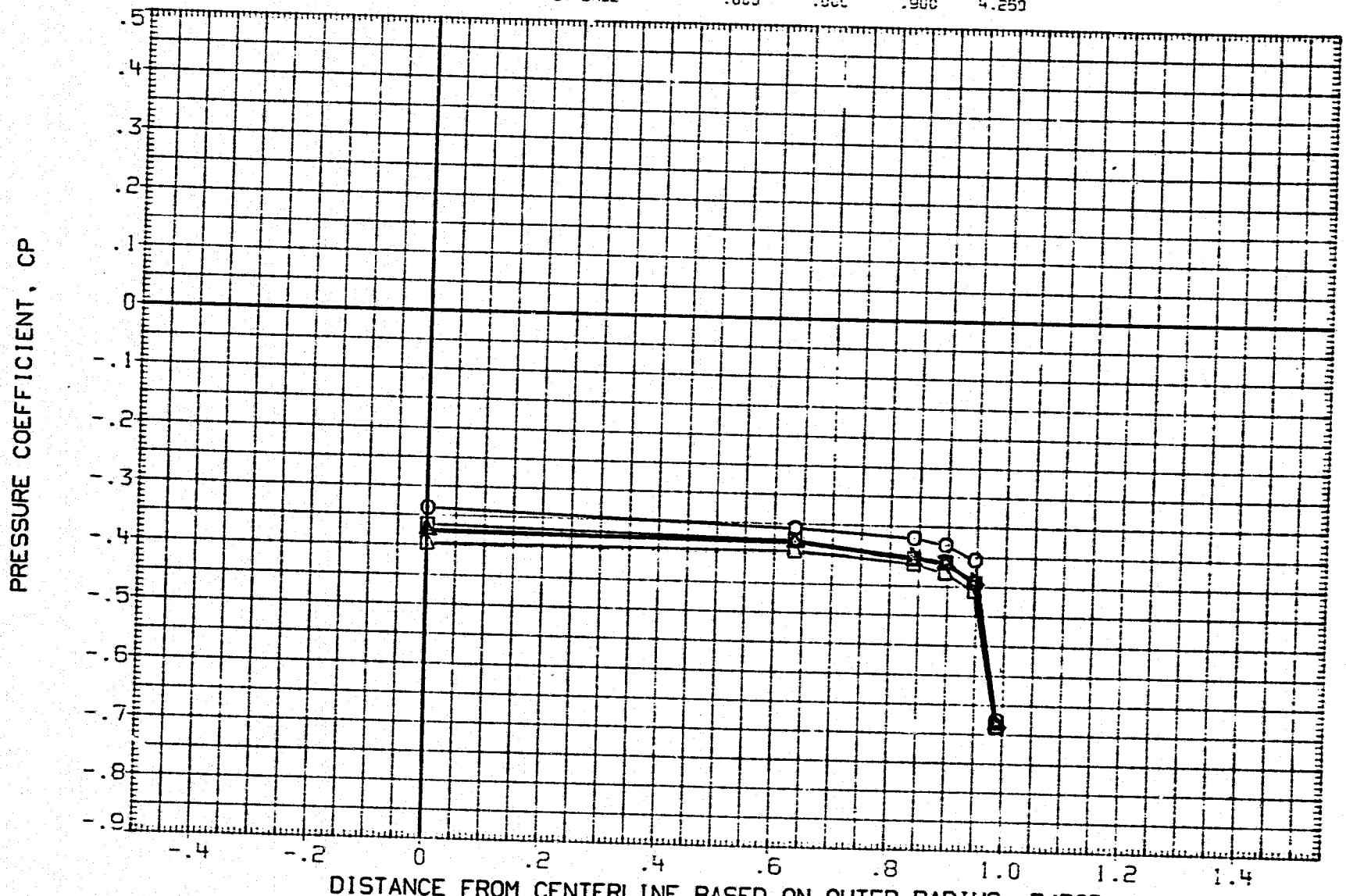



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = 4.000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H86) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H81) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | .900 | 4.250 |

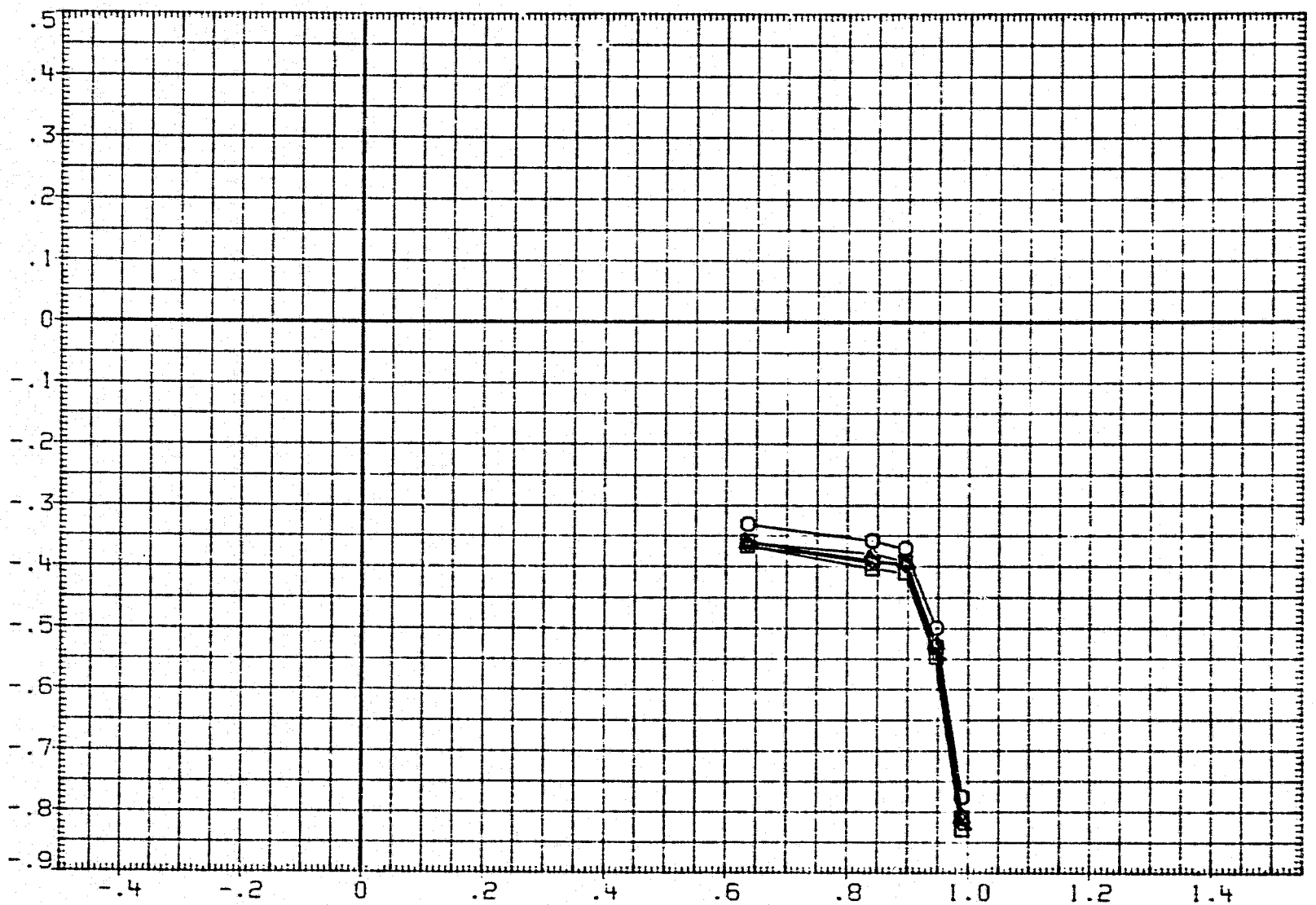



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = 4.000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H36) | ◸ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H31) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .900 | 4.250 |

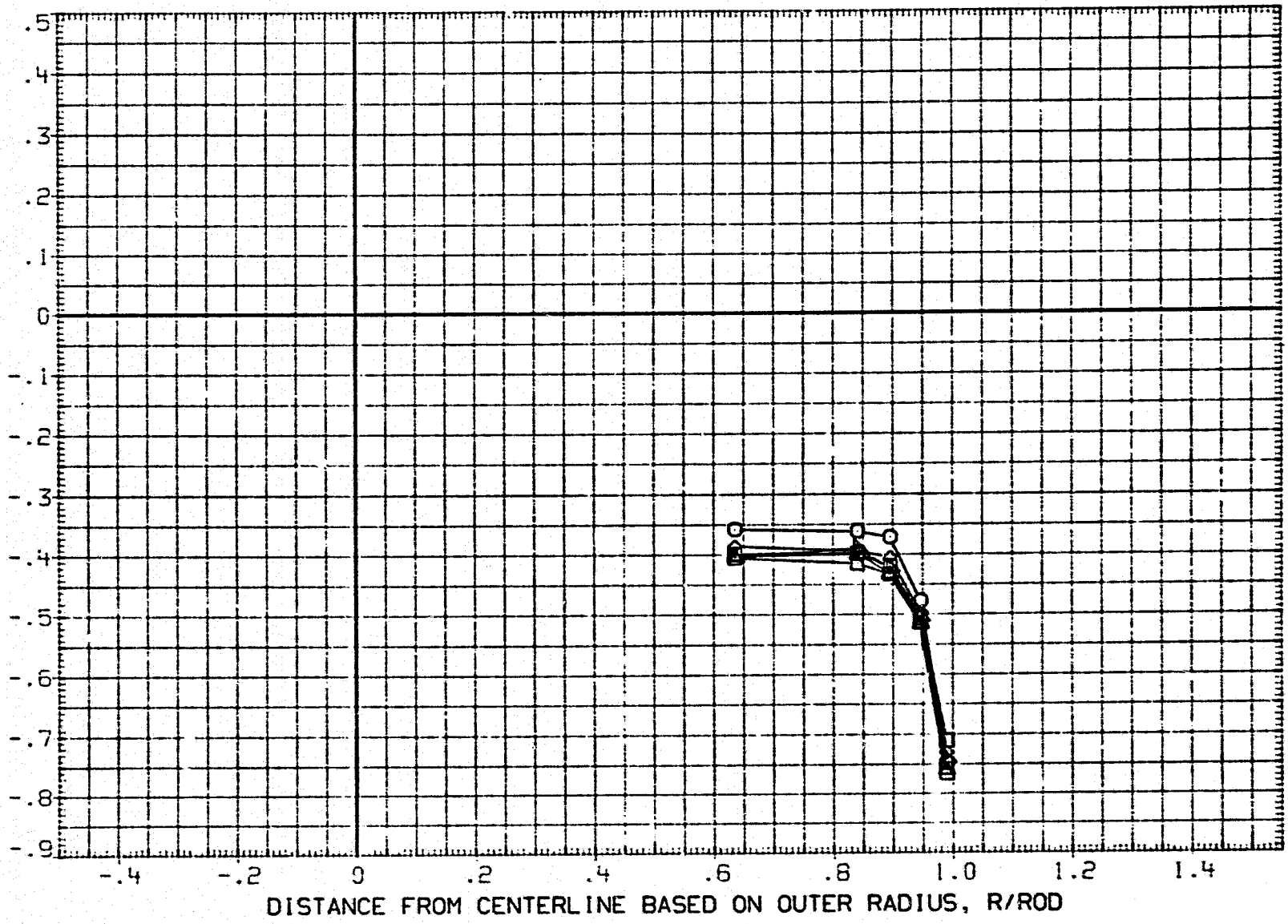



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = 4.000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H29) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H21) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H16) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4H12) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4HB6) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | .900 | 4.250 |
| (BE4HB1) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | .900 | 4.250 |

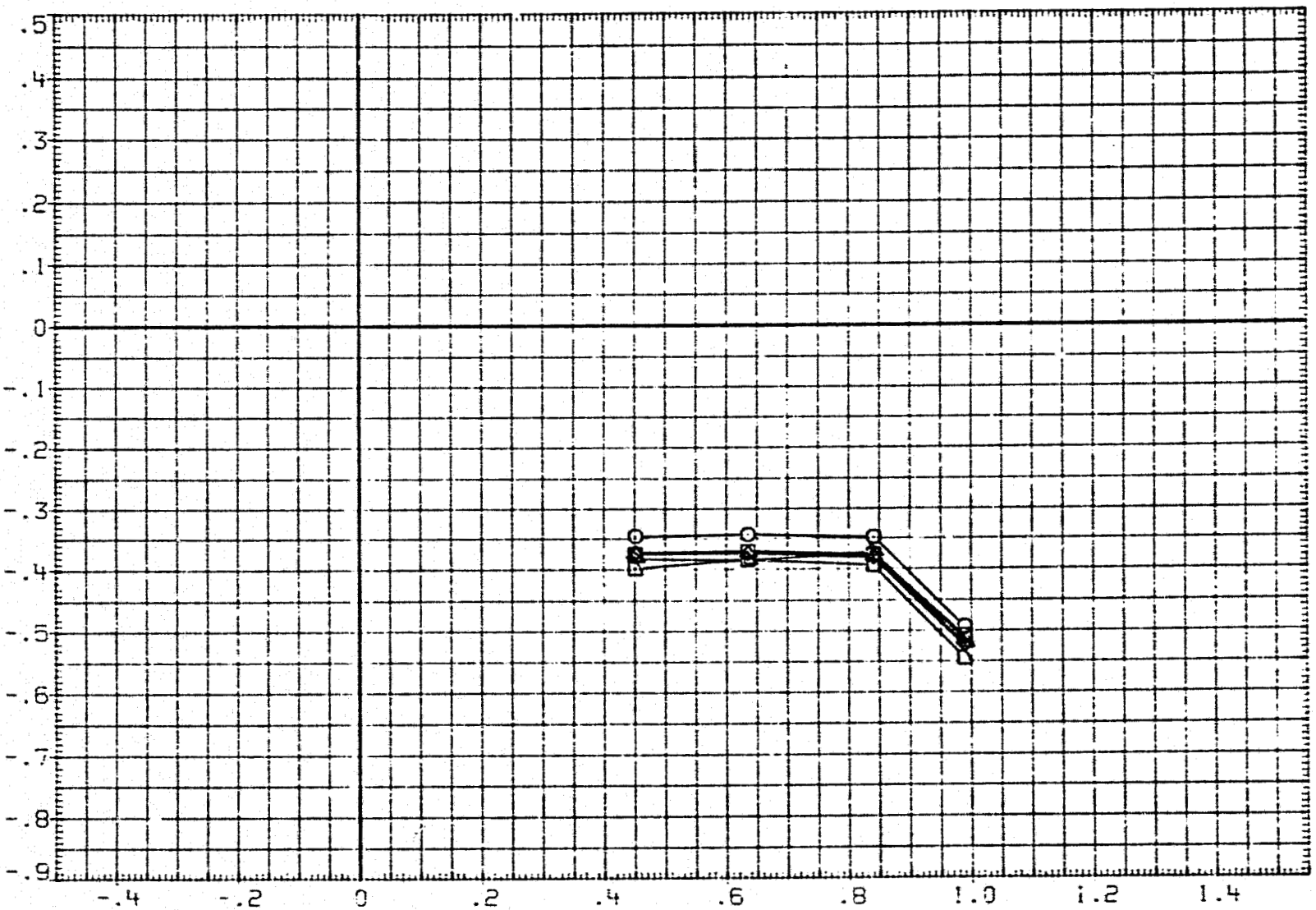



FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = 4.000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4HB7) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4HB2) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |

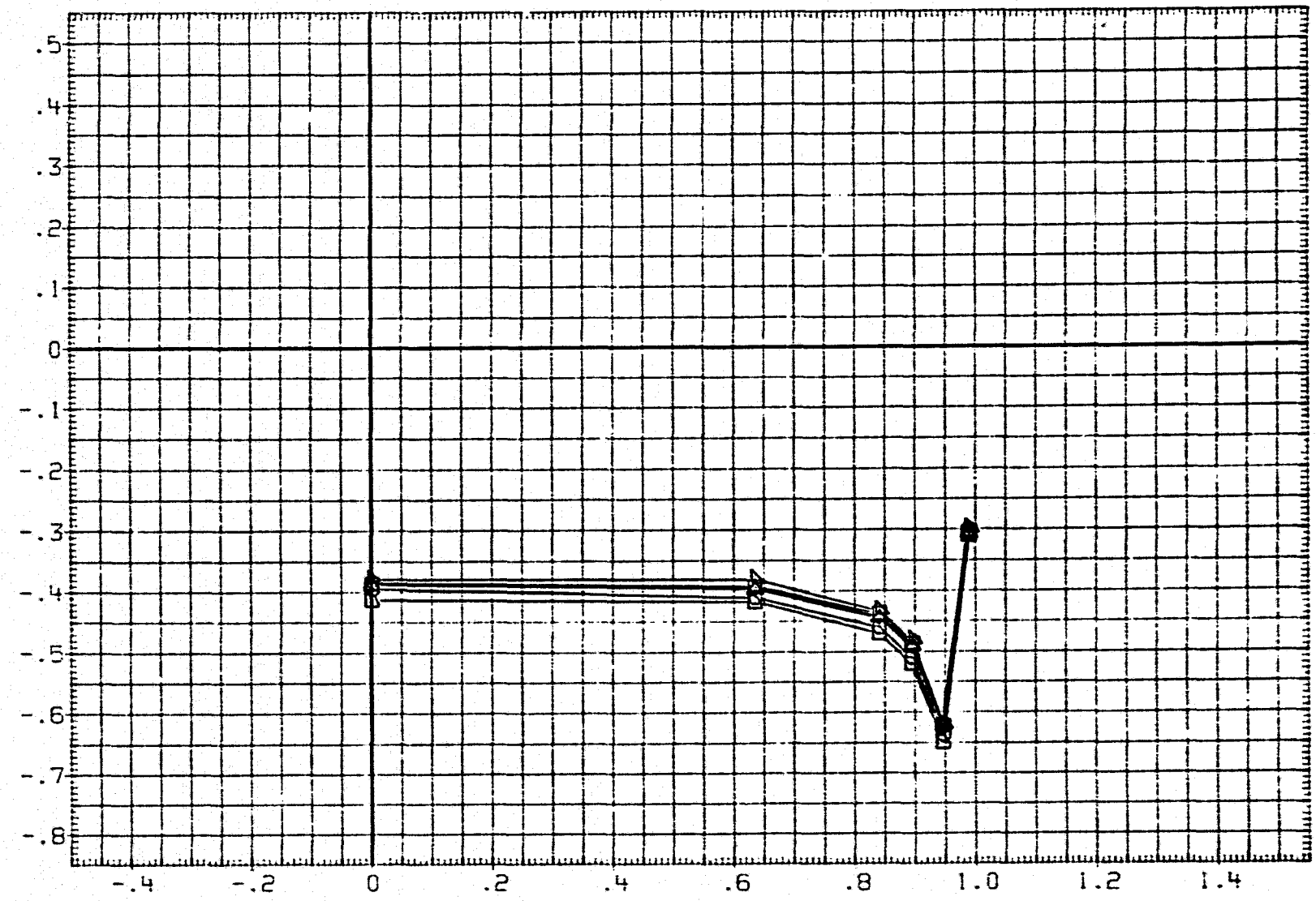



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = -4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H87) | ◸ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H82) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |

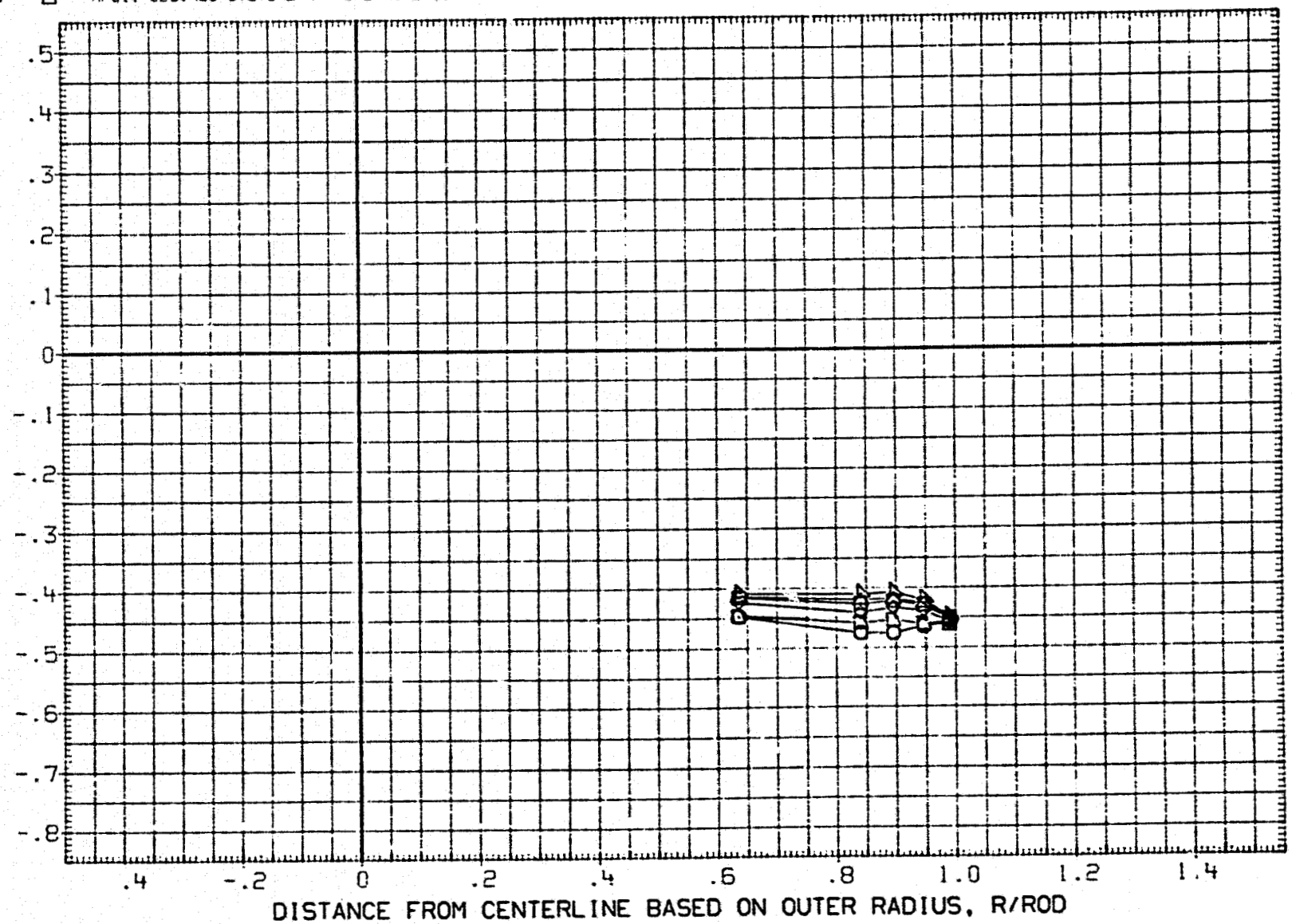



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = -4.000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H37) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H82) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |

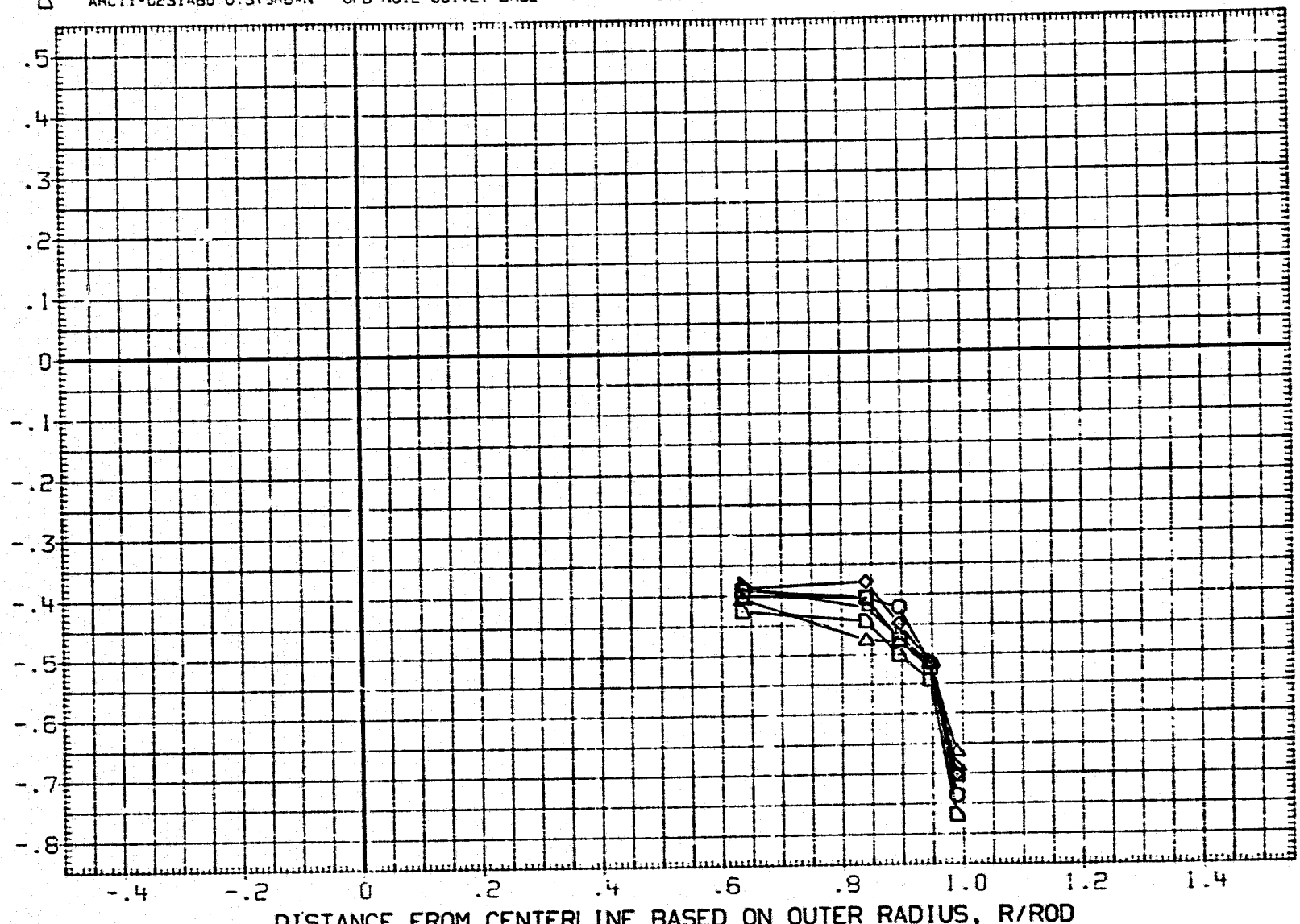



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = -4.000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H87) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H62) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |

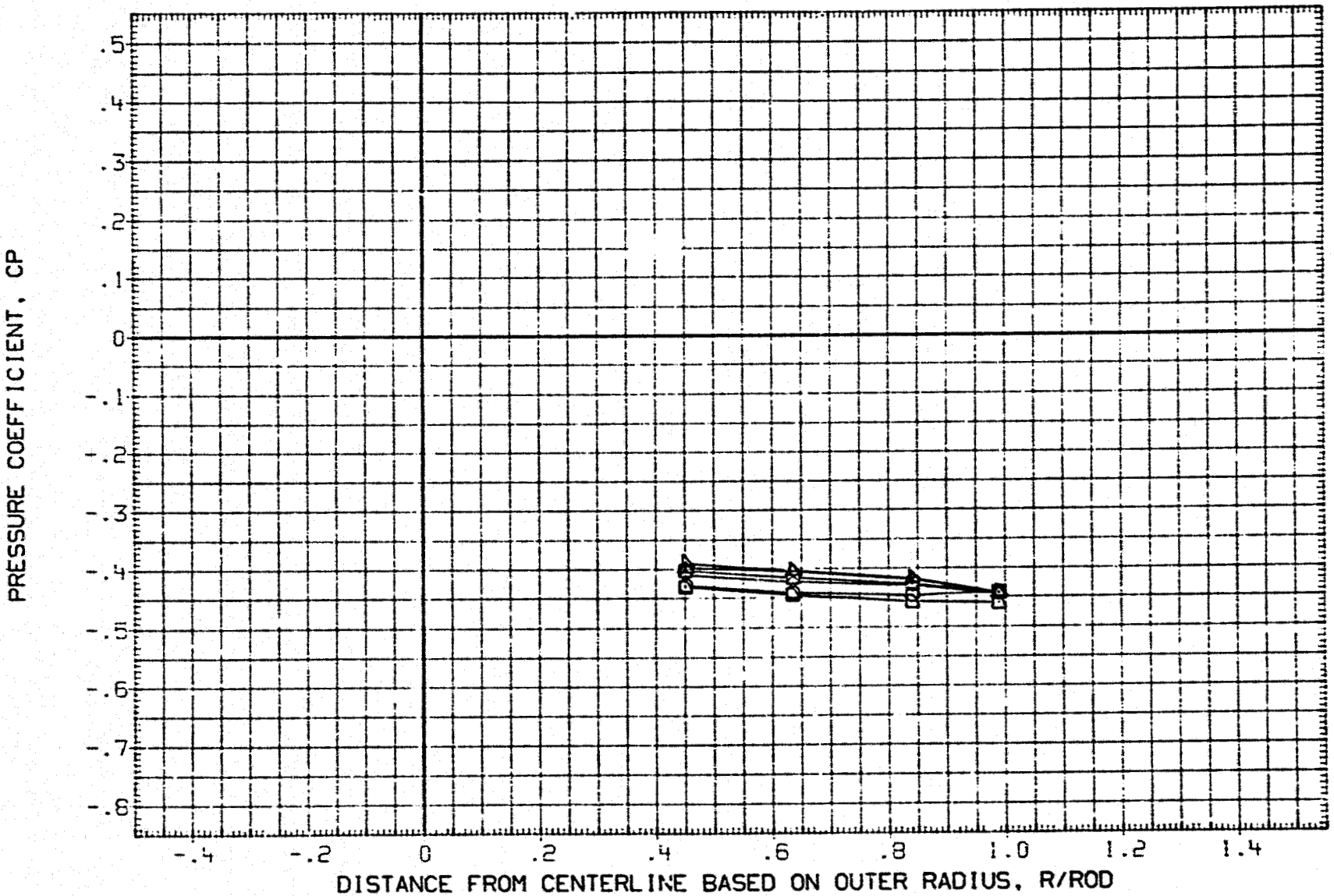



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = -4.000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4HB7) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTJET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4HB2) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTJET BASE | .000 | .000 | 1.100 | 4.250 |

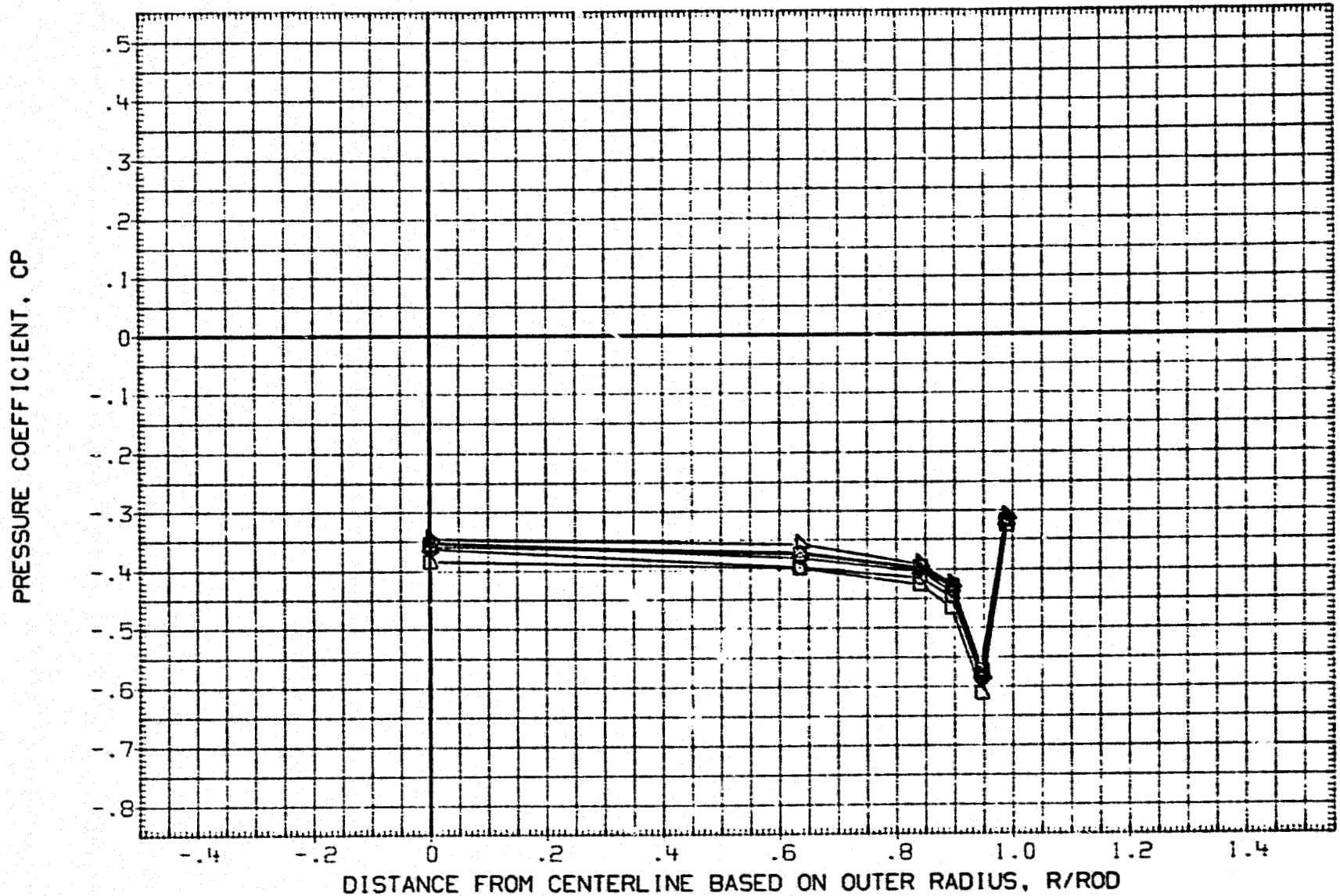



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-023IA8D OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-023IA8D OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-023IA8D OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-023IA8D OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H87) | ▷ | ARC11-023IA8C OTS(SRB-N ORB NO.1 OUTJET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H52) | D | ARC11-023IA8D OTS(SRB-N ORB NO.2 OUTJET BASE | .000 | .000 | 1.100 | 4.250 |

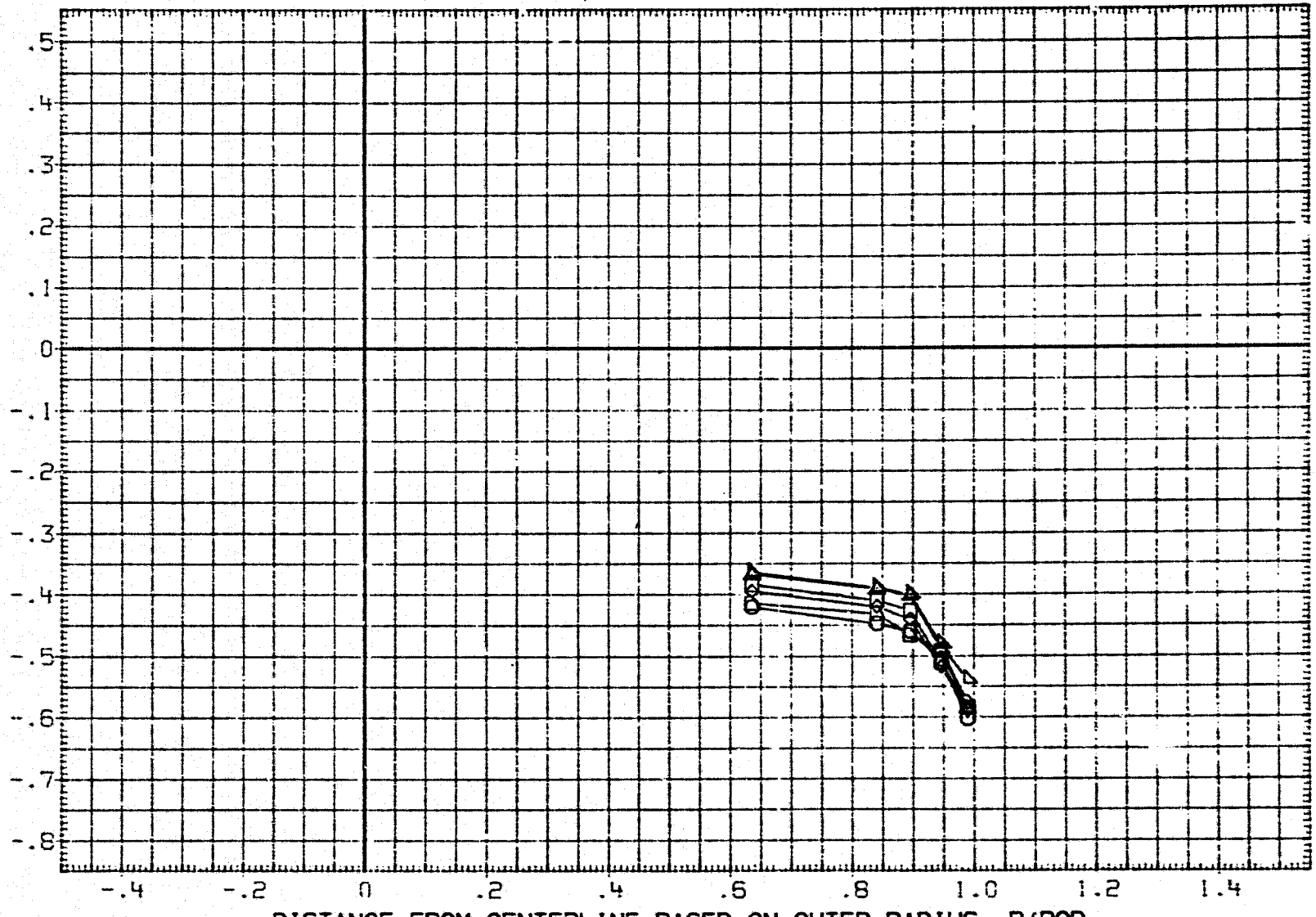



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-023IA80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-023IA80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-023IA80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-023IA80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H87) | ▷ | ARC11-023IA80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H82) | D | ARC11-023IA80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |

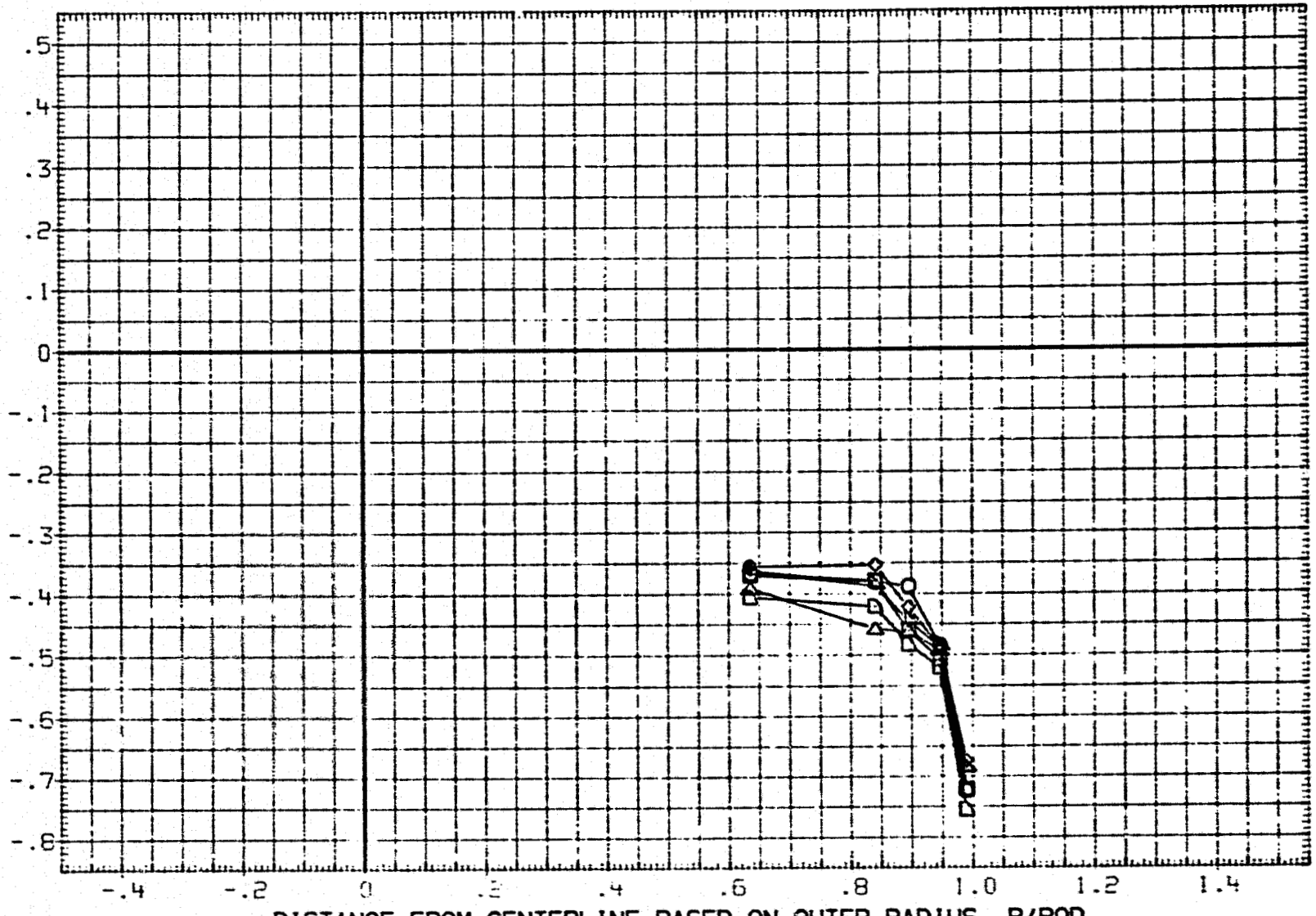



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4HB7) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4HB2) | D | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT) ET BASE | .000 | .000 | 1.100 | 4.250 |

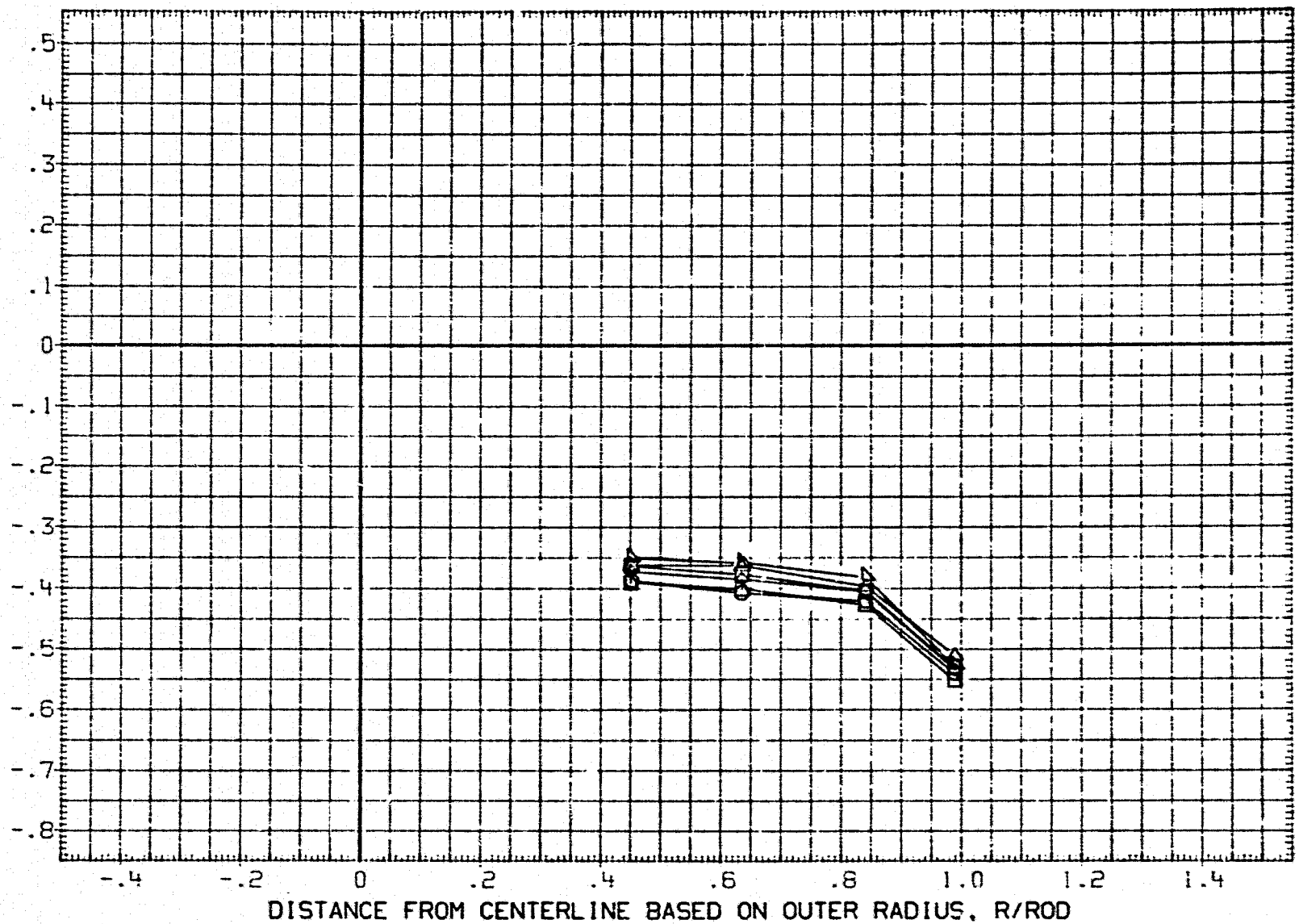



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H87) | ▽ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H82) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |

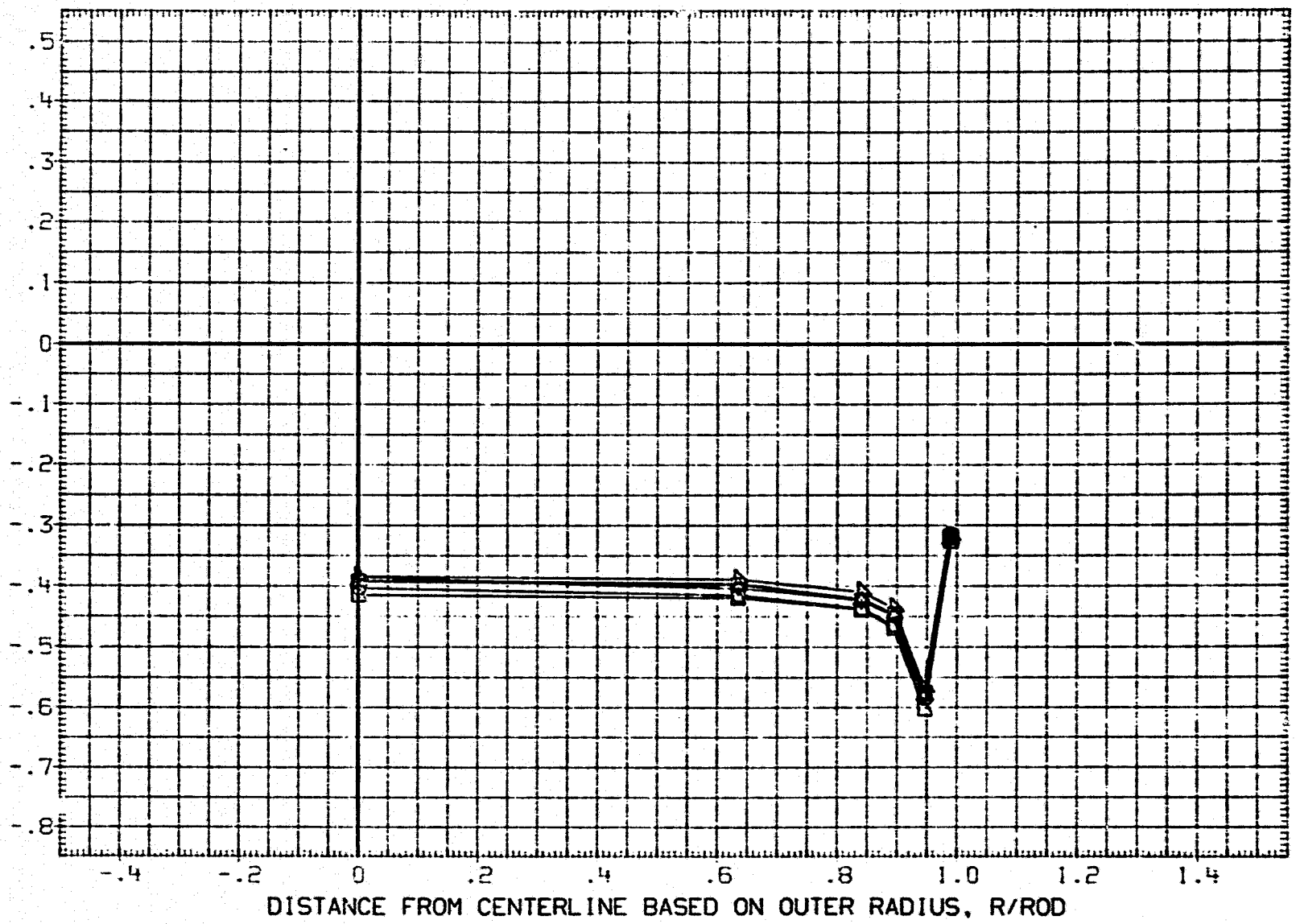



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = 4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4HB7) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4HB2) | D | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |

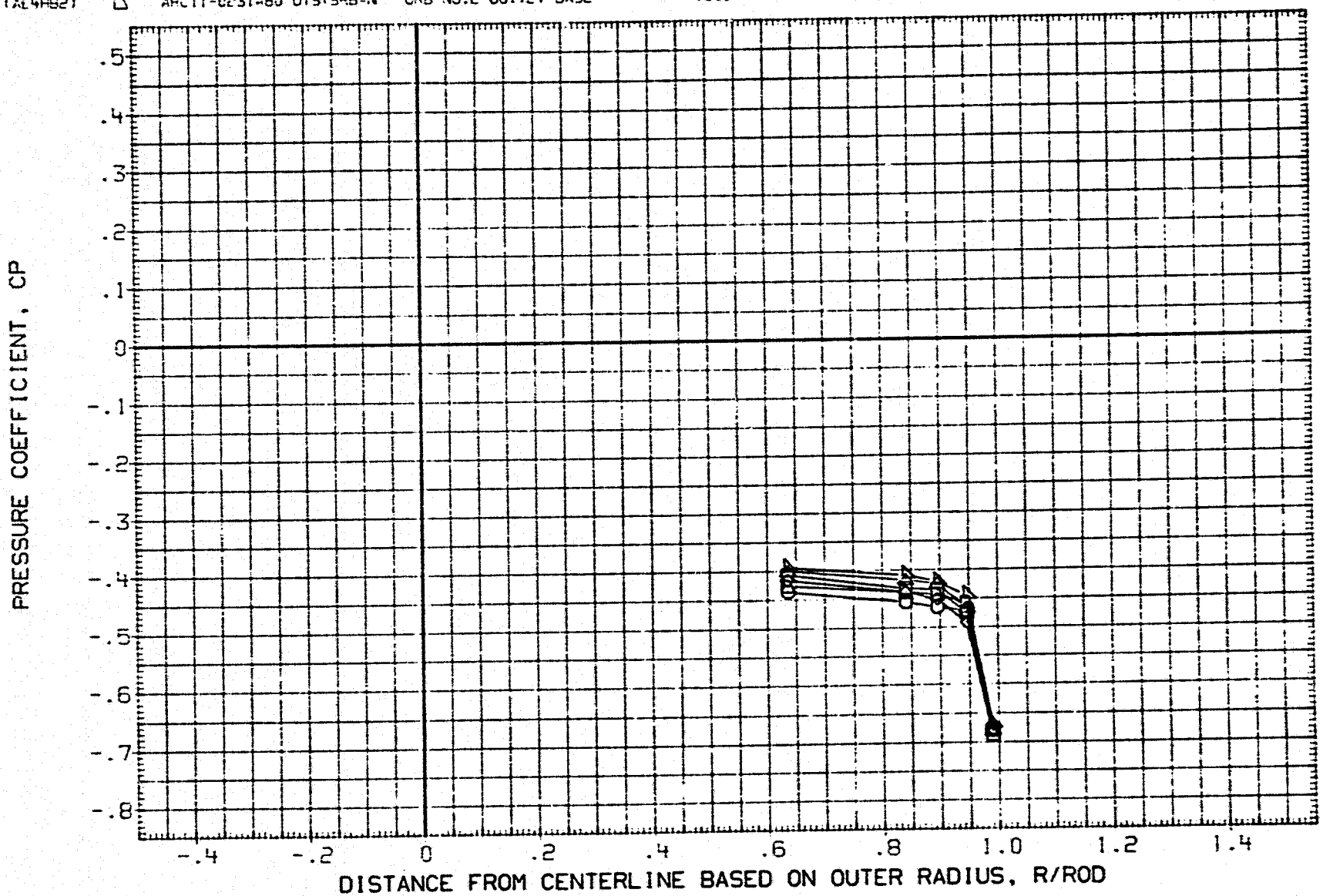



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = 4.000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H87) | ▽ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H82) | D | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |

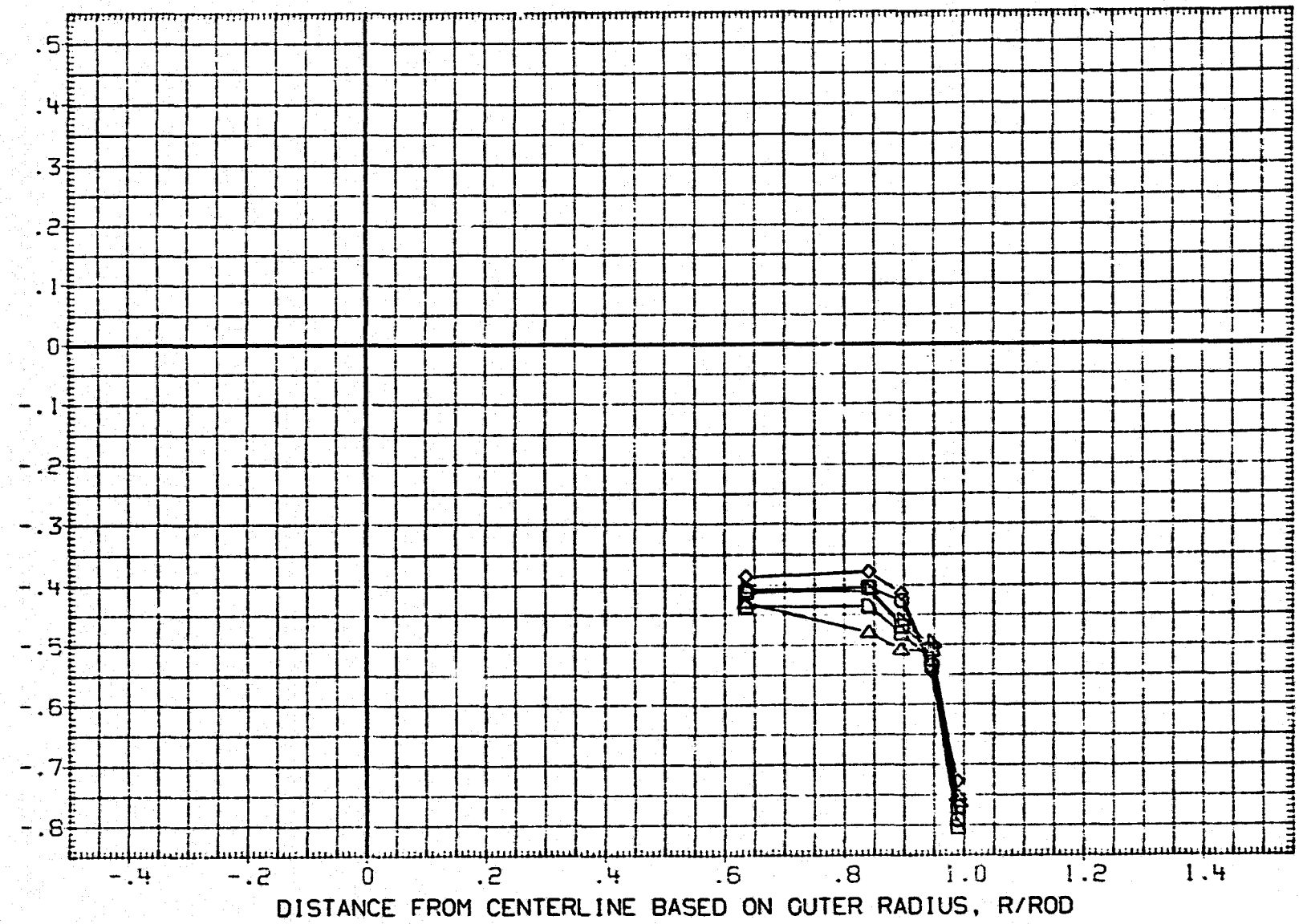



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = 4.000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RM/L |
|---|---|---|---|---|---|---|
| (AE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H22) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4H13) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4HB7) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |
| (AE4HB2) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |

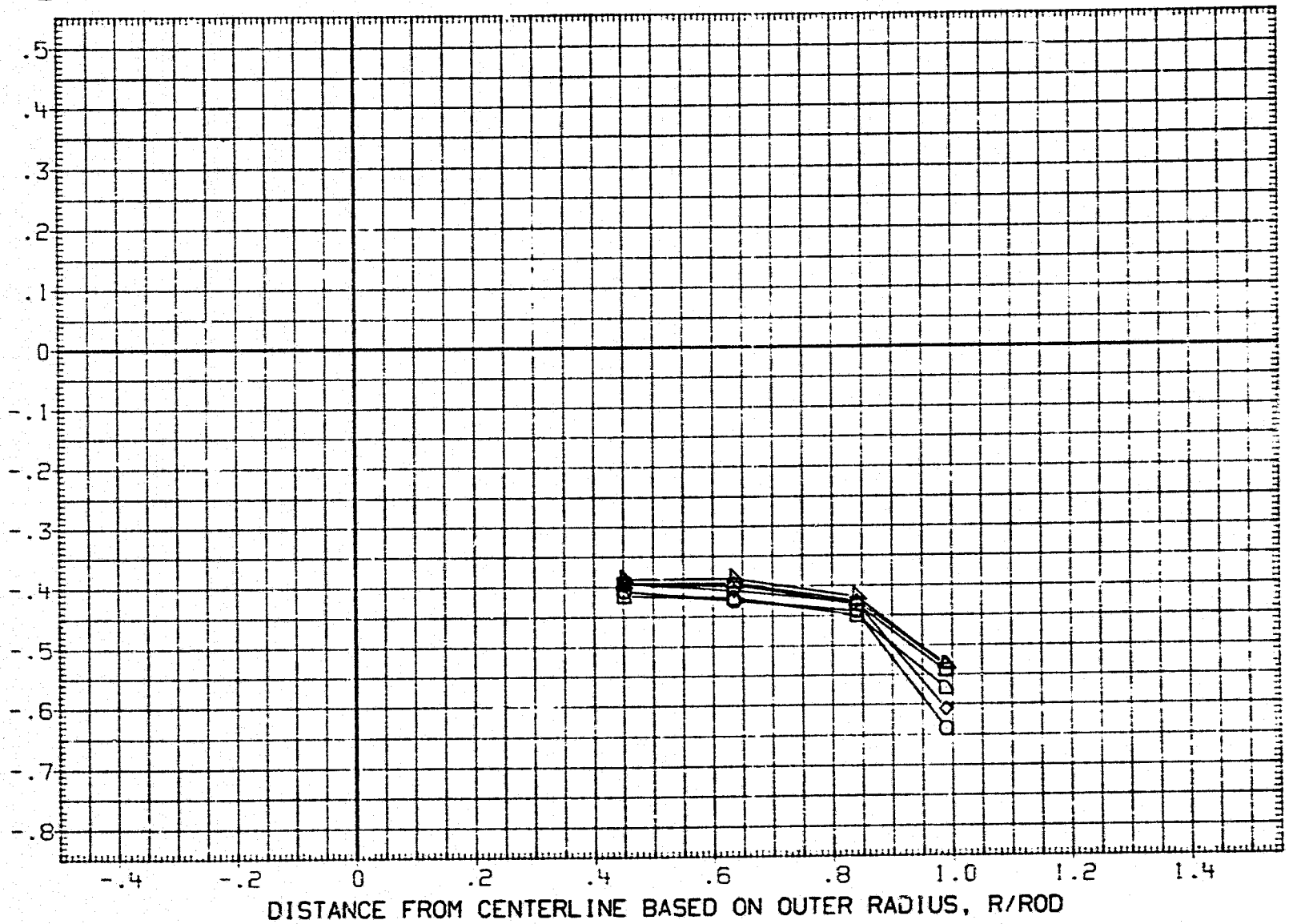



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = 4.000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (BE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H22) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H13) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H87) | ▽ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H82) | D | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |

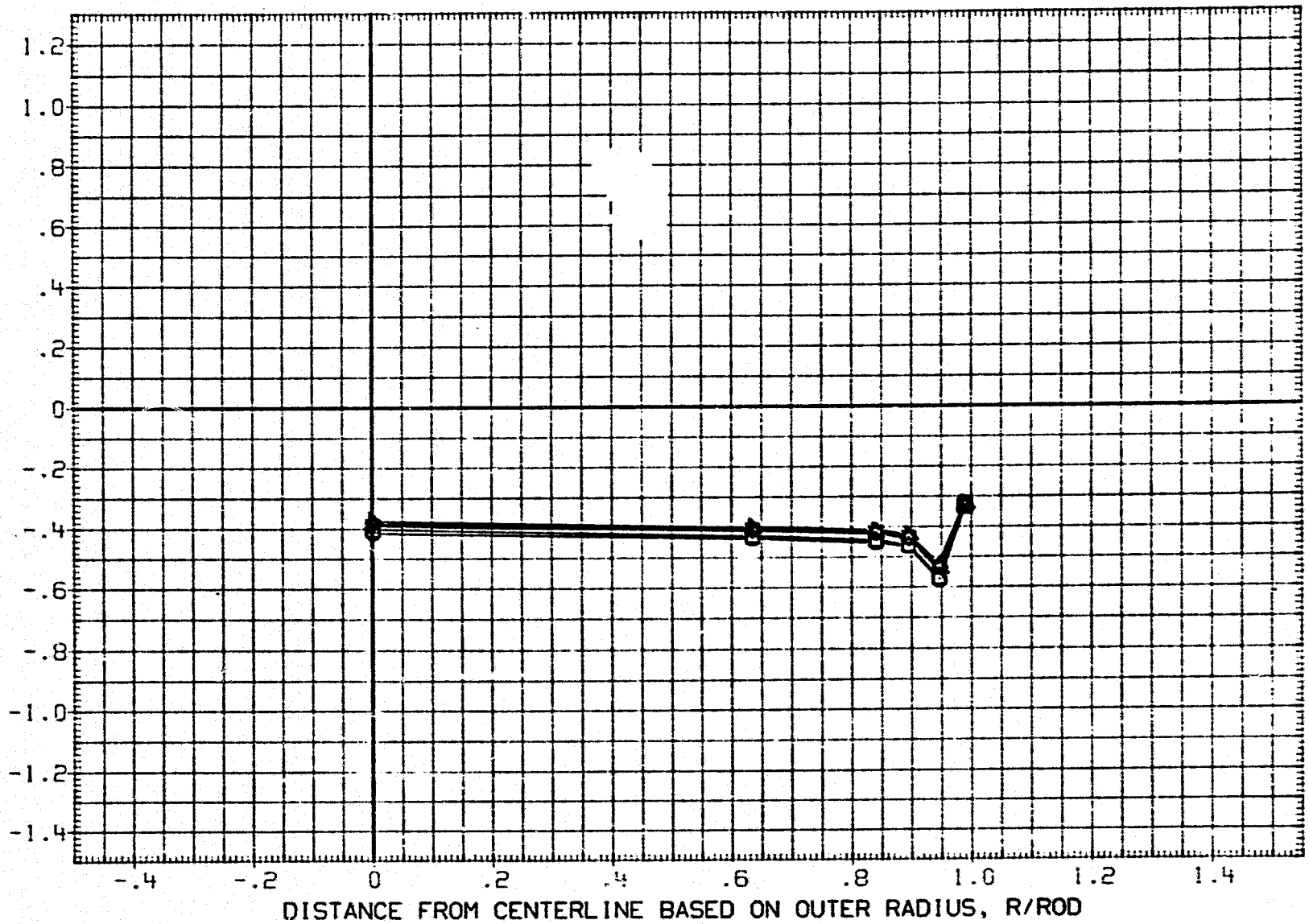



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = -4.000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H30) | ○ | ARC11-023IABO OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H22) | □ | ARC11-023IABO OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H17) | ◇ | ARC11-023IABO OTS(SRB=N ORB-N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H13) | △ | ARC11-023IABO OTS(SRB=N ORB=N• ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4HB7) | ▷ | ARC11-023IABO OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4HB2) | D | ARC11-023IABO OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |

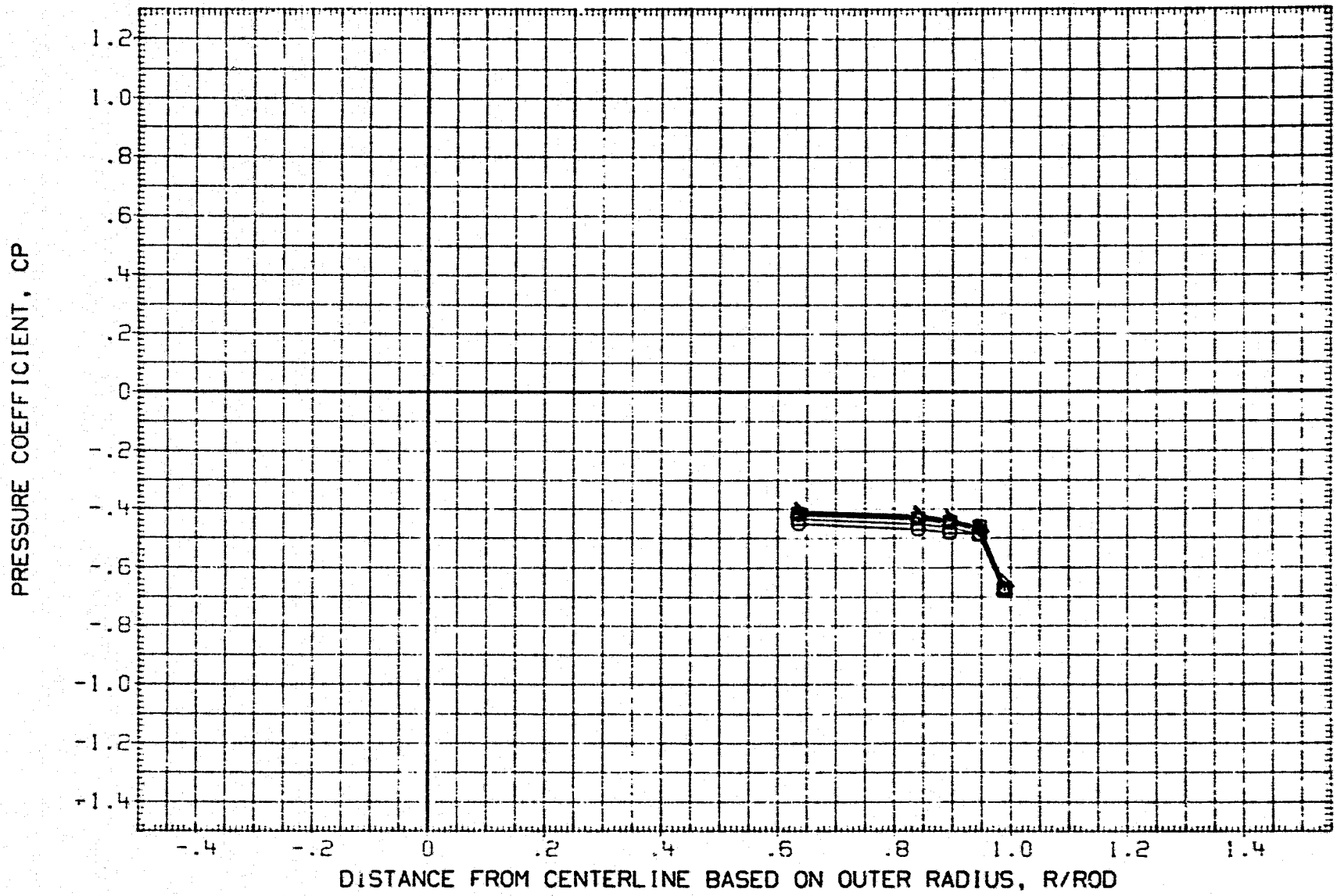



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = -4.000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H30) | ○ | ARC11-023IA80 OTS(SRB=OFF | ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H22) | □ | ARC11-023IA80 OTS(SRB=N | ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H17) | ◇ | ARC11-023IA80 OTS(SRB=N | ORB=N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H13) | △ | ARC11-023IA80 OTS(SRB=N | ORB=N+ ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H37) | ▽ | ARC11-023IA80 OTS(SRB=N | ORB NO.1 OUT) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H32) | ▷ | ARC11-023IA80 OTS(SRB=N | ORB NO.2 OUT) ET BASE | .000 | .000 | 1.100 | 4.250 |

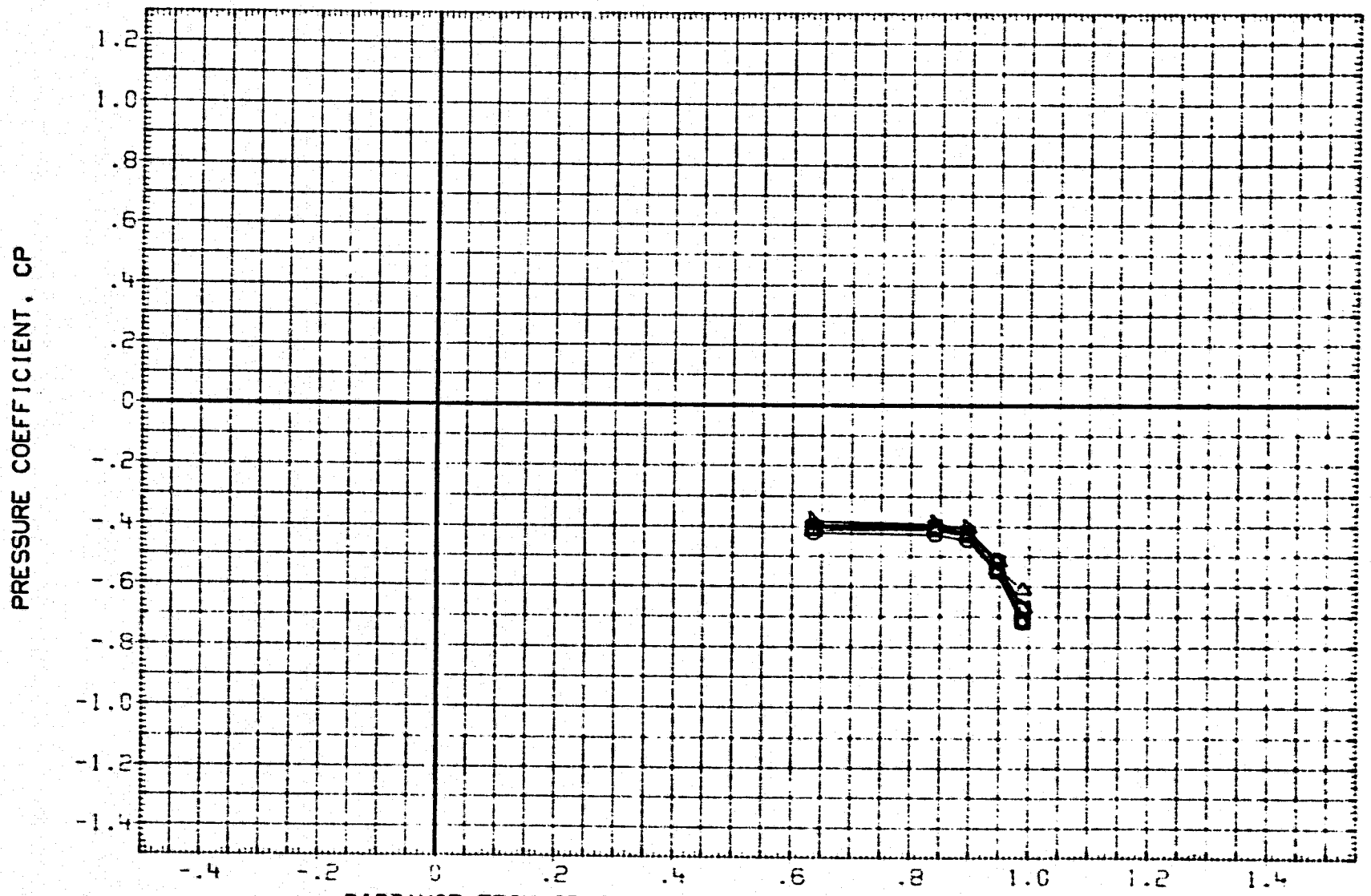



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = -4.000 PHI = 120.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| [illegible] | ○ | ARC11-0231A80 OTS(SRB-OFF CRB=OFF) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| [illegible] | □ | ARC11-0231A80 OTS(SRB-N CRB=N ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| [illegible] | ◇ | ARC11-0231A80 OTS(SRB-N CRB=N- ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| [illegible] | △ | ARC11-0231A80 OTS(SRB-N CRB=N+ ) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| [illegible] | ◁ | ARC11-0231A80 OTS(SRB-N CRB NO.1 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |
| [illegible] | ▷ | ARC11-0231A80 OTS(SRB-N CRB NO.2 OUT) | ET BASE | .000 | .000 | 1.100 | 4.250 |

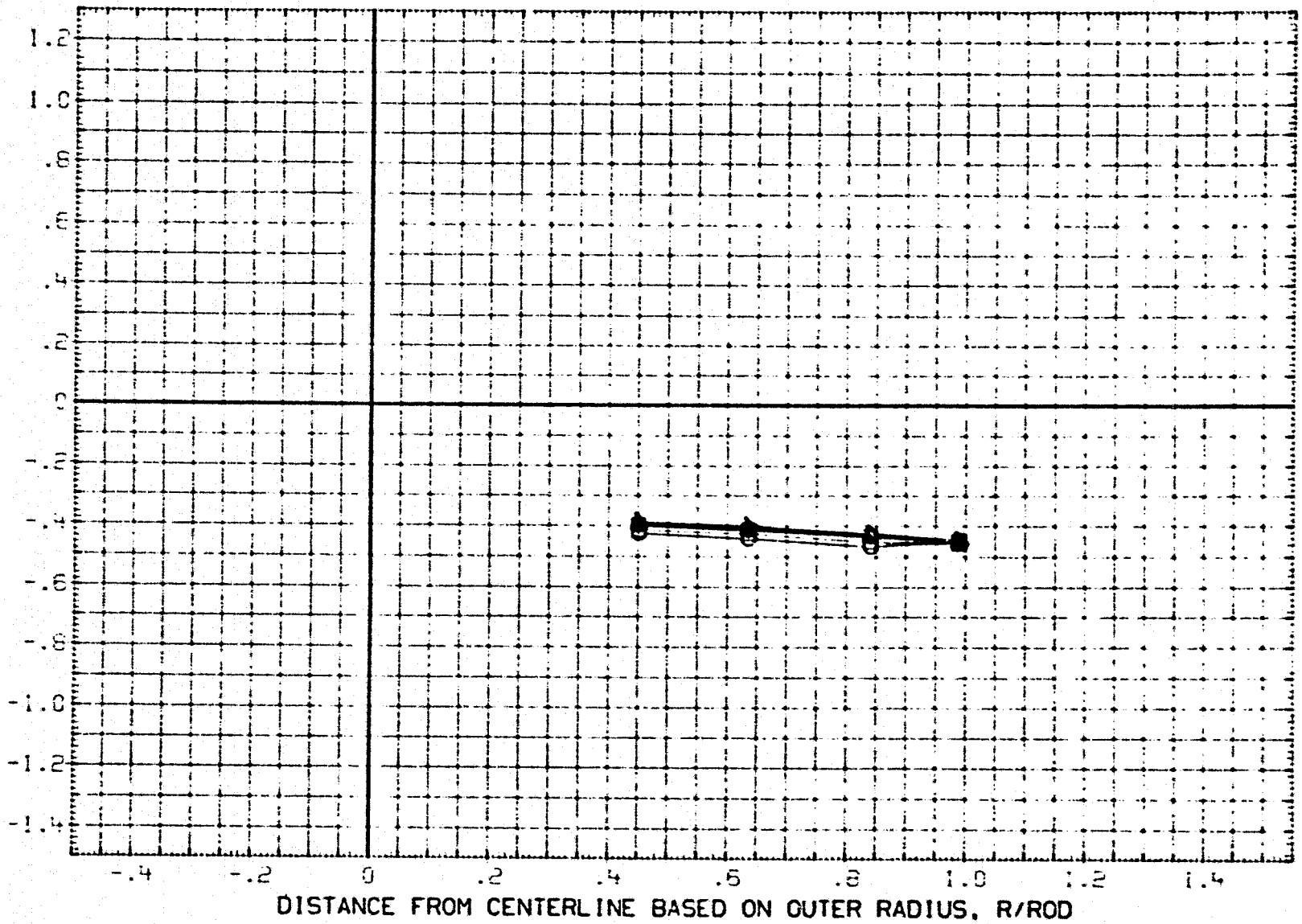



FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = -4.000 PHI = 270.000



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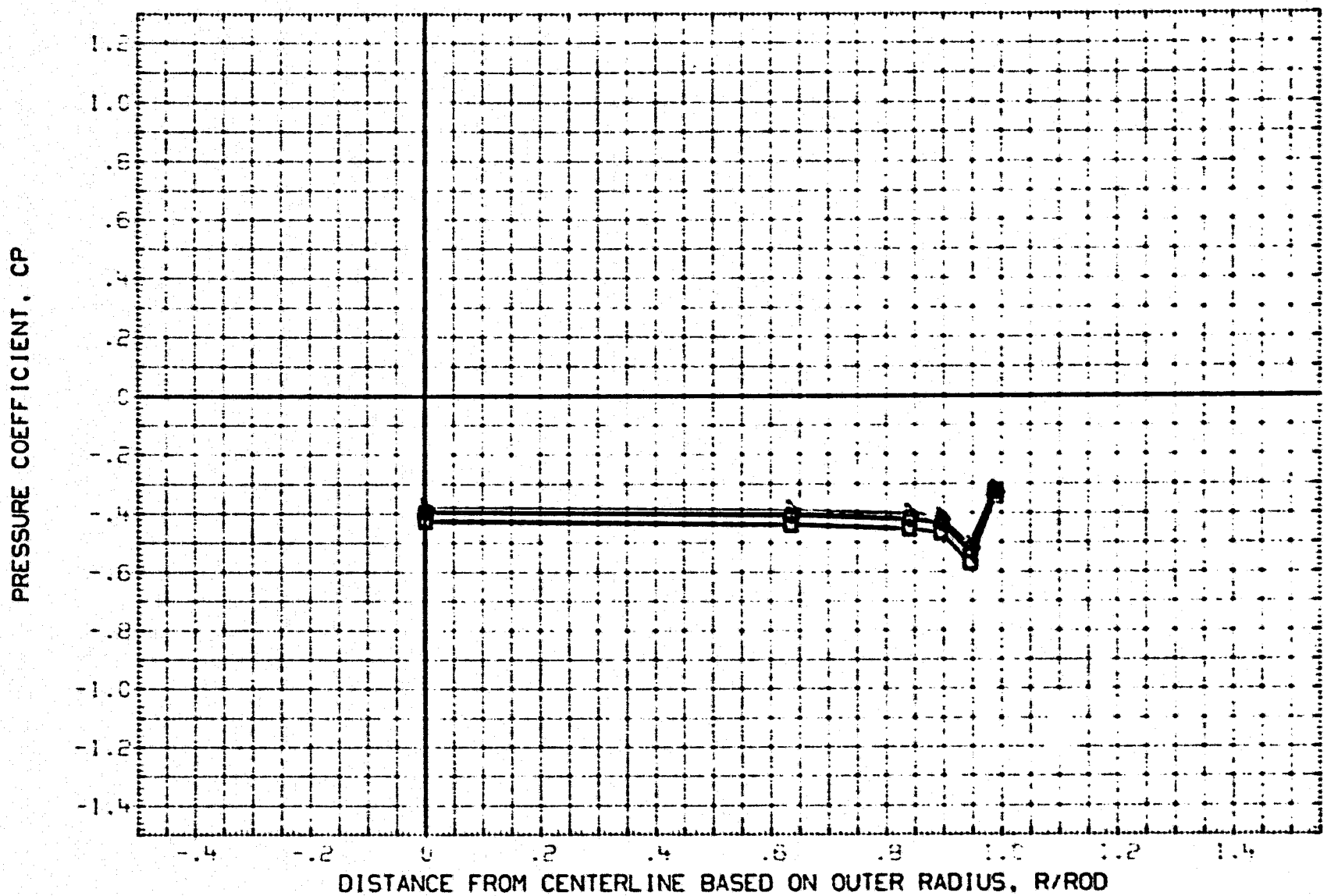


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = 4.000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | PHI |
|---|---|---|---|---|---|---|---|---|
| (BE44130) | O | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | 1.100 | 90.000 |
| (BE44122) | □ | ARC11-0231A80 OTS(SRB=N | ORB-N ) | ET BASE | .000 | .000 | 1.100 | 90.000 |
| (BE44117) | ◇ | *ARC11-0231A80 OTS*(SRB=N | ORB-N- ) | ET BASE | .000 | .000 | 1.100 | 90.000 |
| (BE44131) | △ | ARC11-0231A80 OTS(SRB=N | ORB+N+ ) | ET BASE | .000 | .000 | 1.100 | 90.000 |
| (BE44127) | | ARC11-0231A80 OTS(SRB=N | ORB %0.1 | OUTJET BASE | .000 | .000 | 1.100 | 90.000 |
| (BE44132) | | ARC11-0231A80 OTS(SRB=N | ORB %0.2 | OUTJET BASE | .000 | .000 | 1.100 | 90.000 |

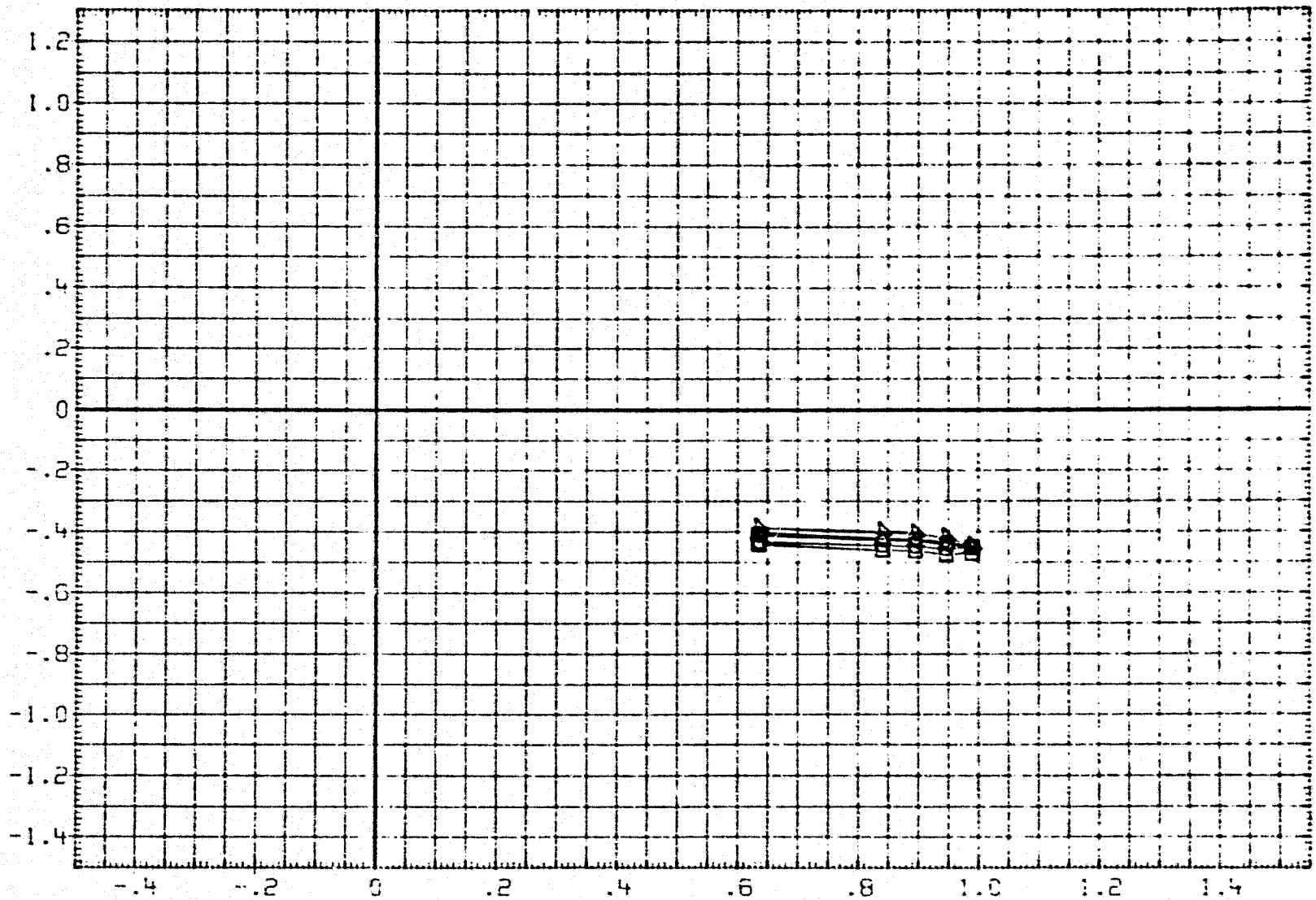


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = 4.000 PHI = 90.000

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| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H22) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H13) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H87) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H82) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.100 | 4.250 |

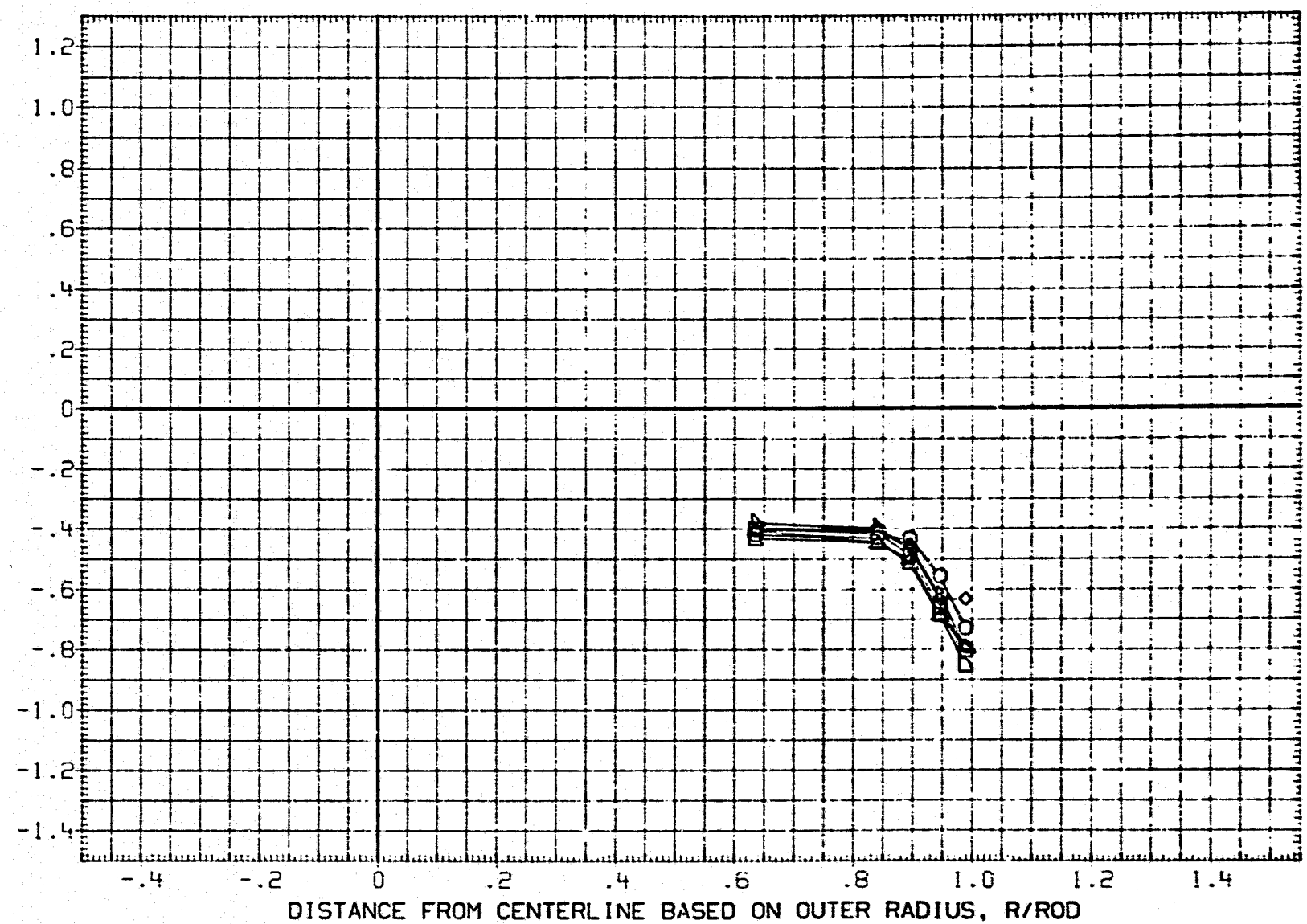


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = 4.000 PH = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H30) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H22) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H17) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H13) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H87) | ◁ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) ET BASE | .000 | .000 | 1.100 | 4.250 |
| (BE4H82) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) ET BASE | .000 | .000 | 1.100 | 4.250 |

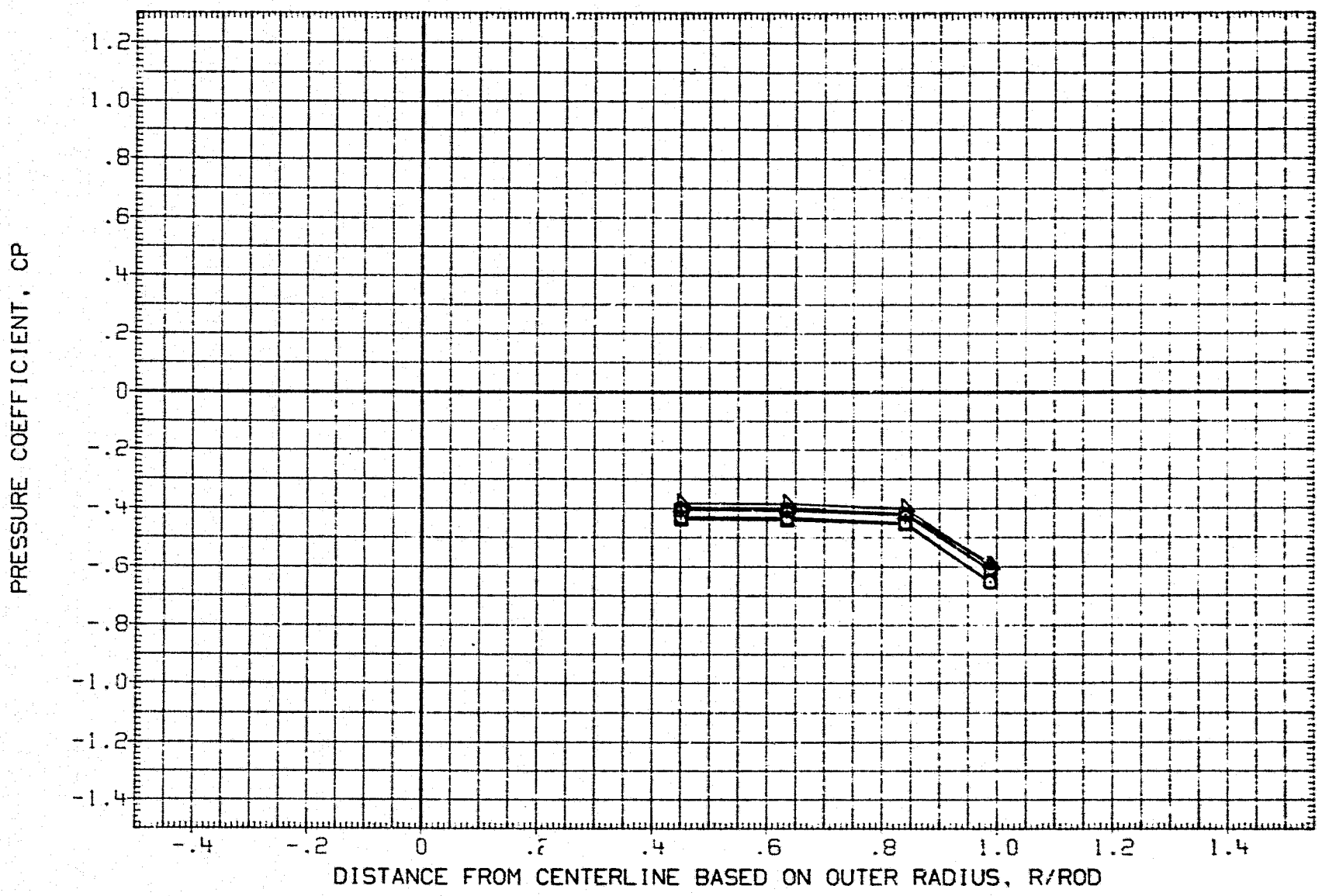


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = 4.000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H18) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H98) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H..) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

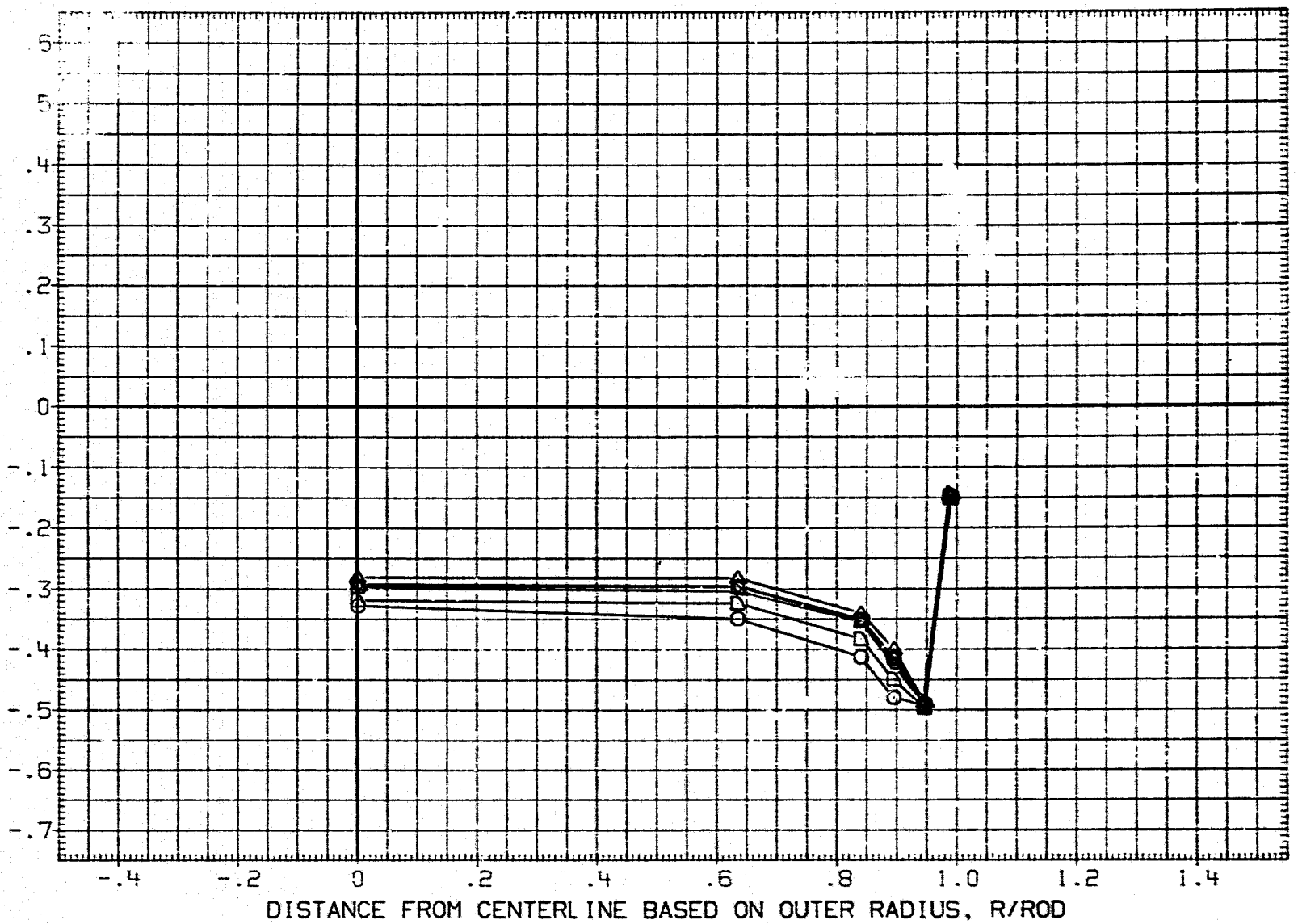


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = -4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H1B) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB3) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB3) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

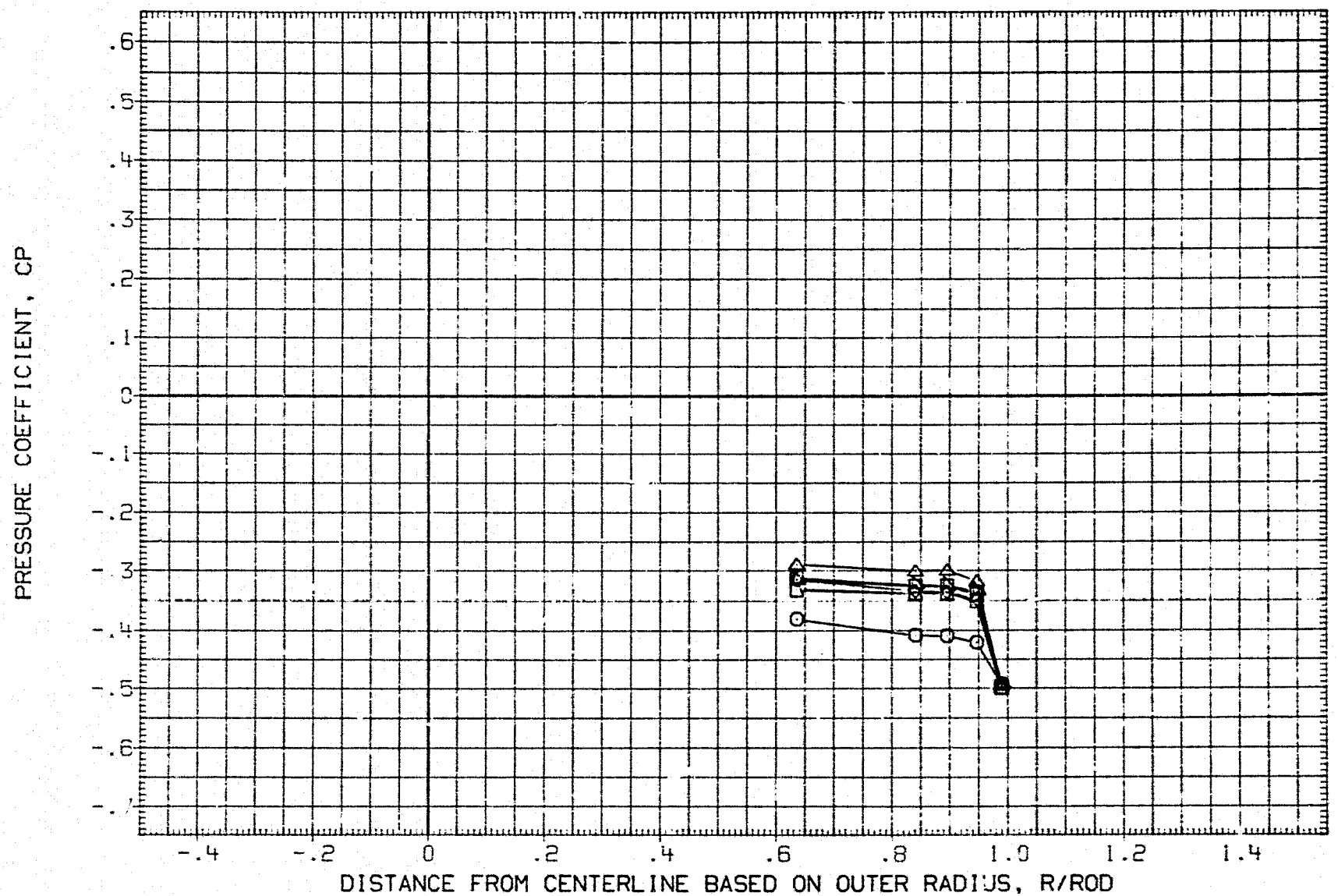


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = -4.000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H18) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB8) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB3) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |

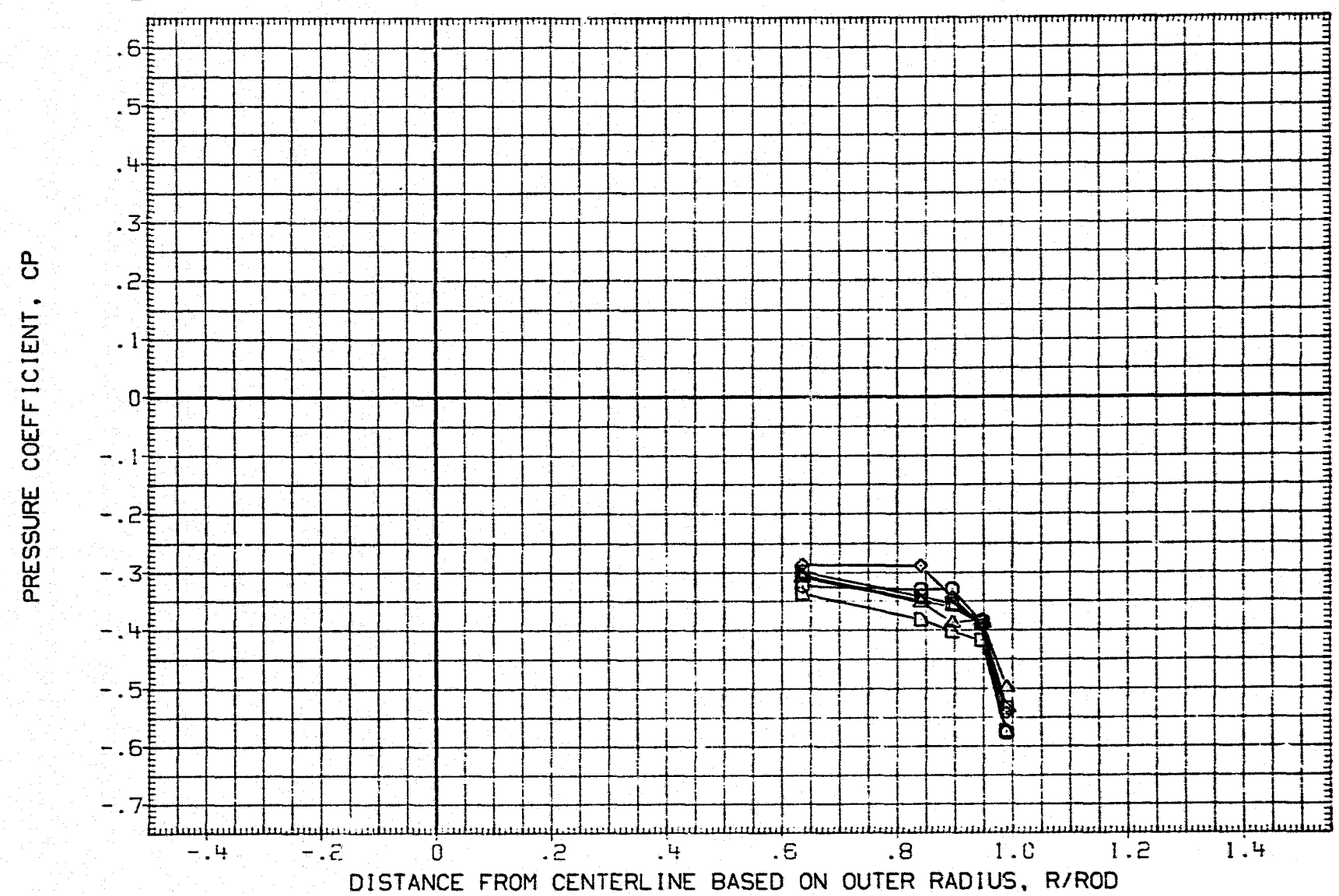


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = -4.000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H18) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H88) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H83) | D | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

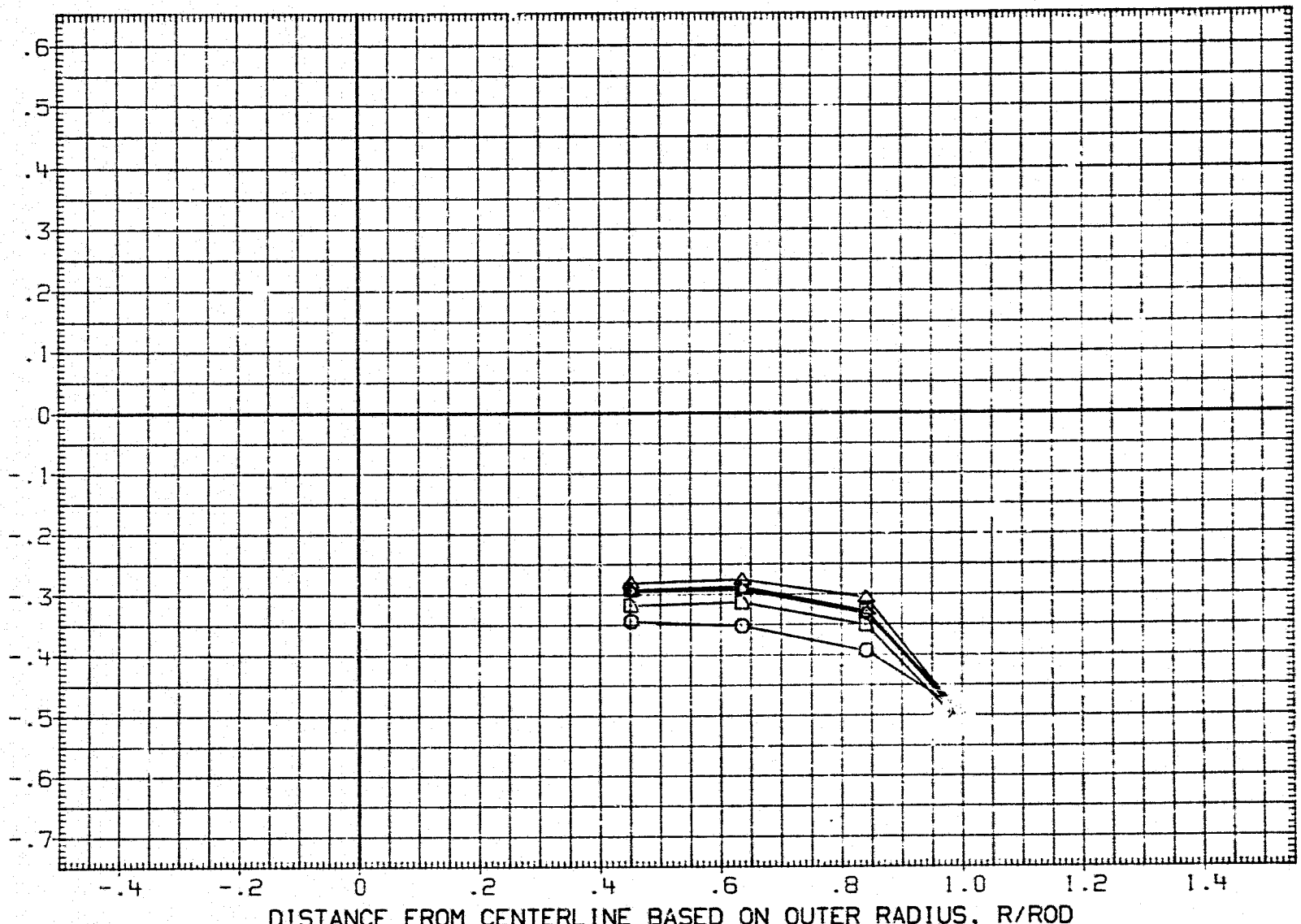


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = -4.000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H18) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB8) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB3) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) ET BASE | .000 | .000 | 1.250 | 4.250 |

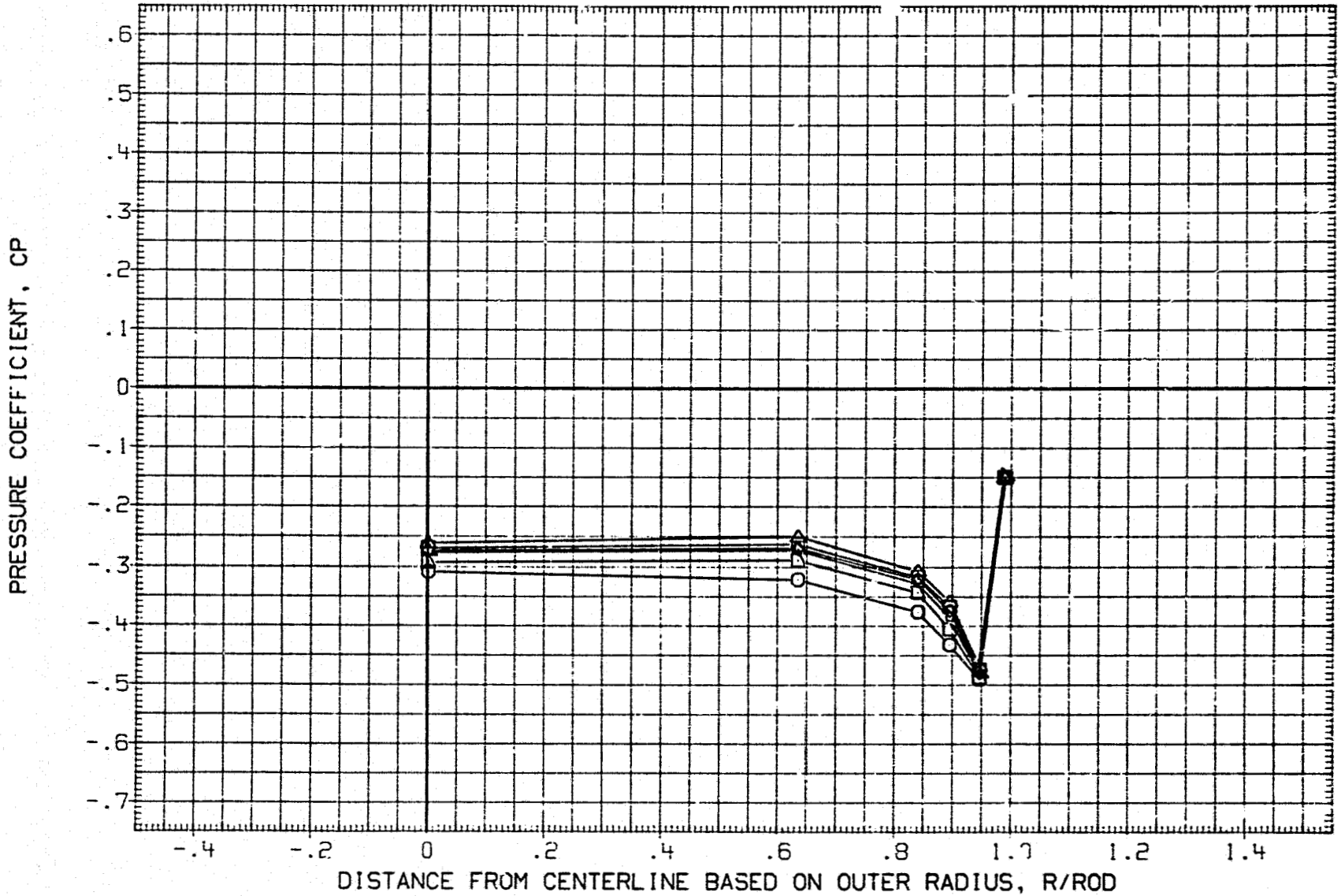


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H18) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB8) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB3) | D | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

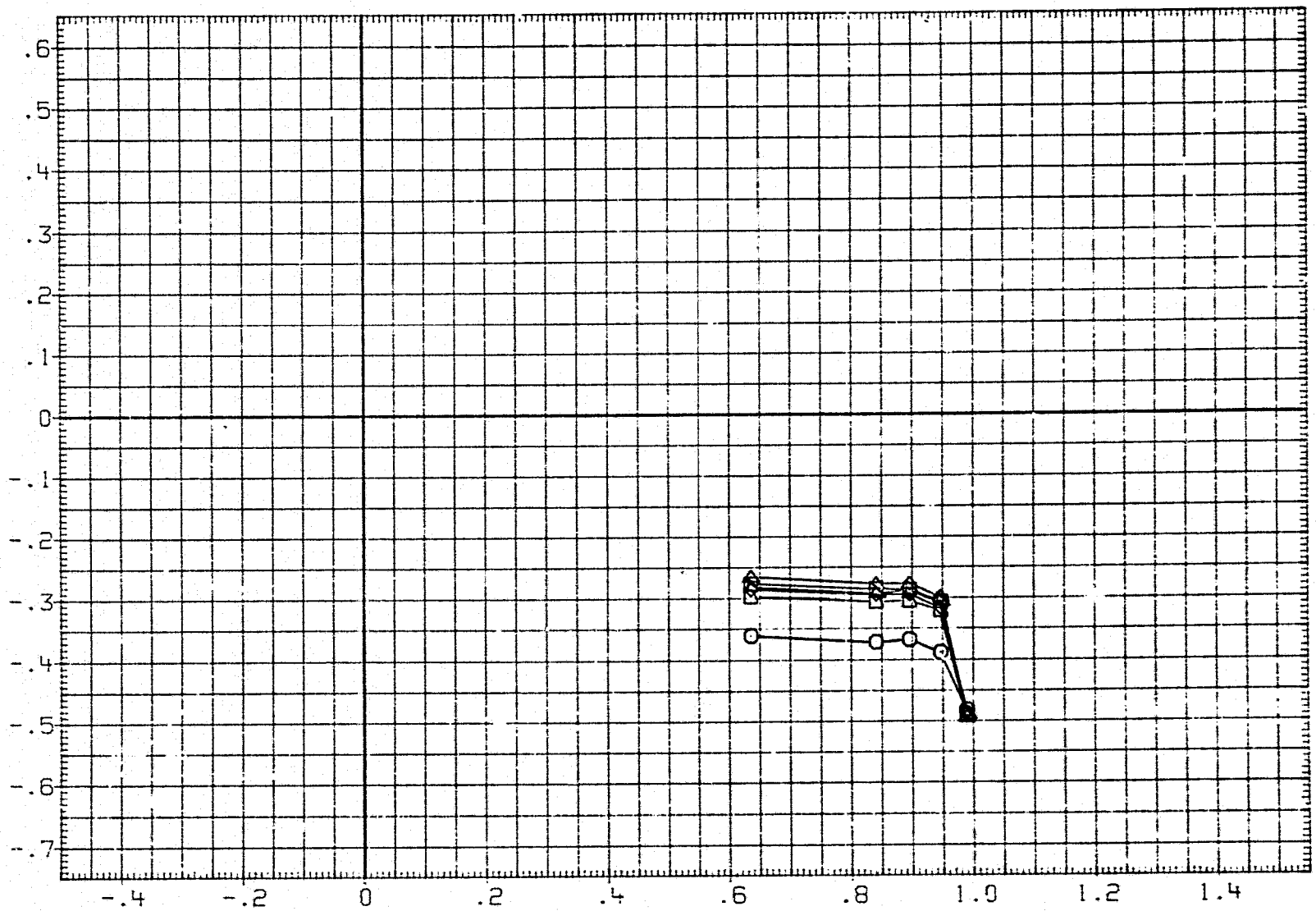


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H18) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H88) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H83) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

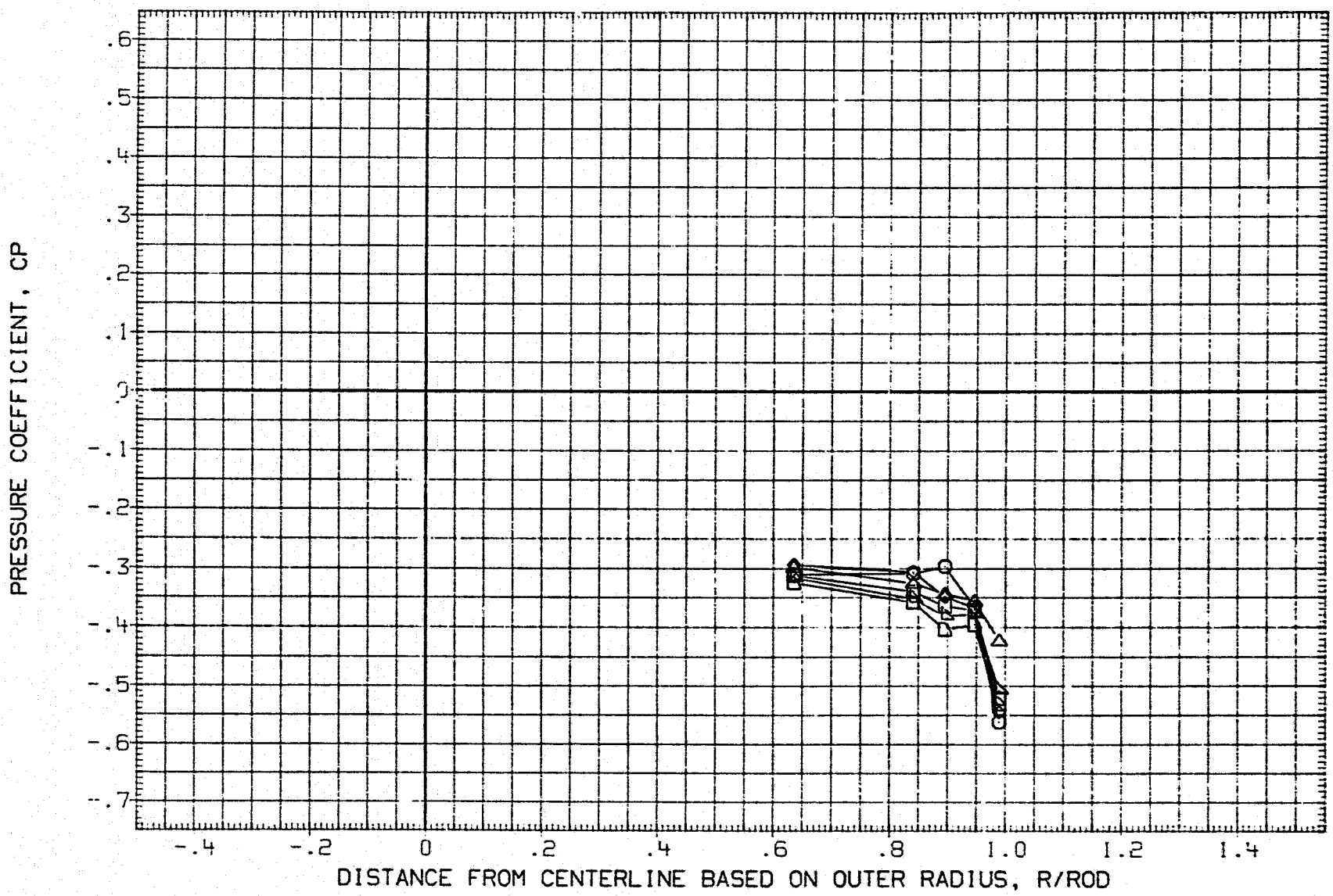


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H18) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB8) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB3) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |

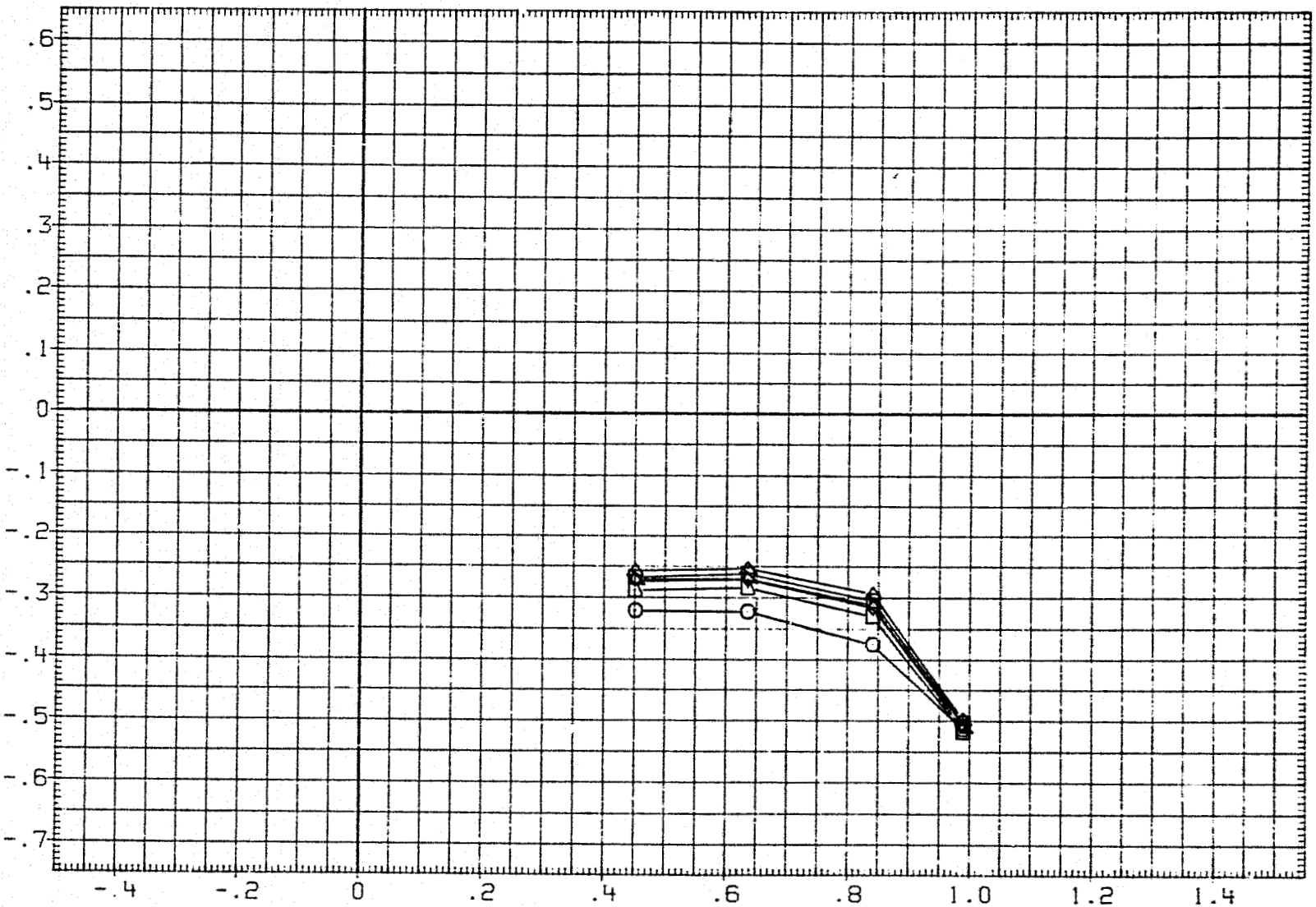


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = 000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H18) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HBB) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB3) | ▱ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

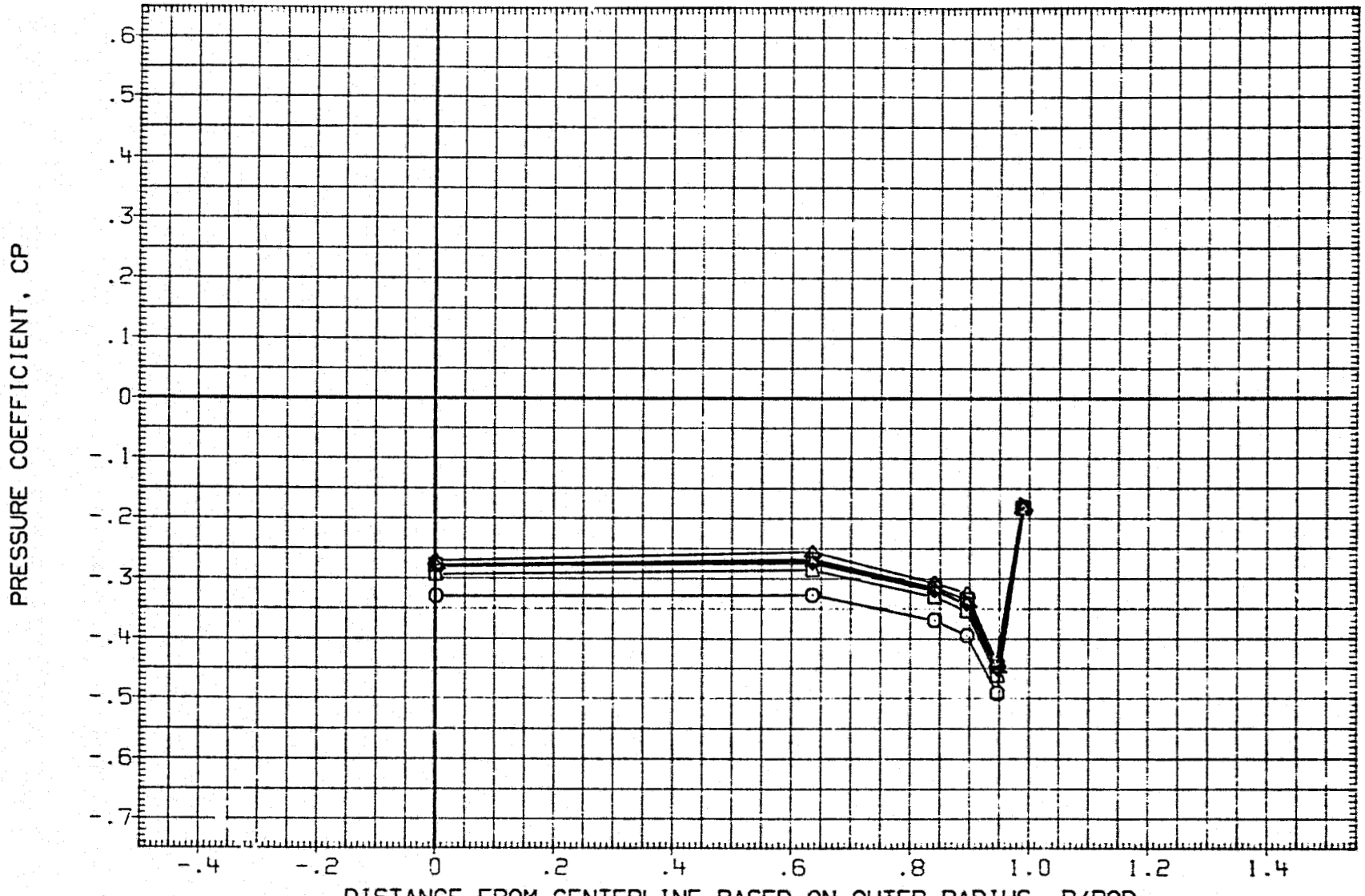


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = 4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H18) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H88) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H83) | D | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

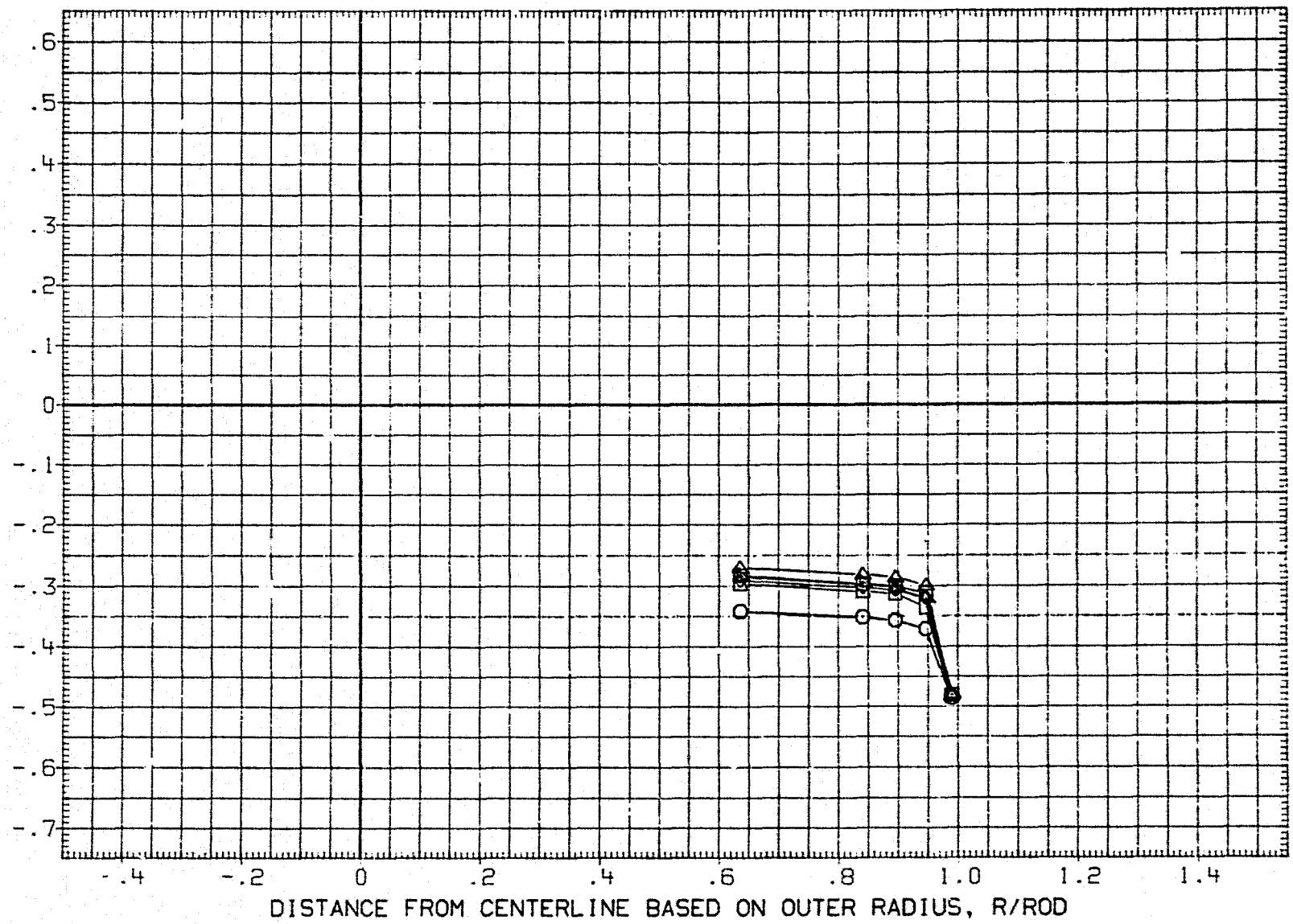


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = 4.000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-023IA80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-023IA80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H18) | ◇ | ARC11-023IA80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-023IA80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H88) | ▷ | ARC11-023IA80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H83) | ⬠ | ARC11-023IA80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |

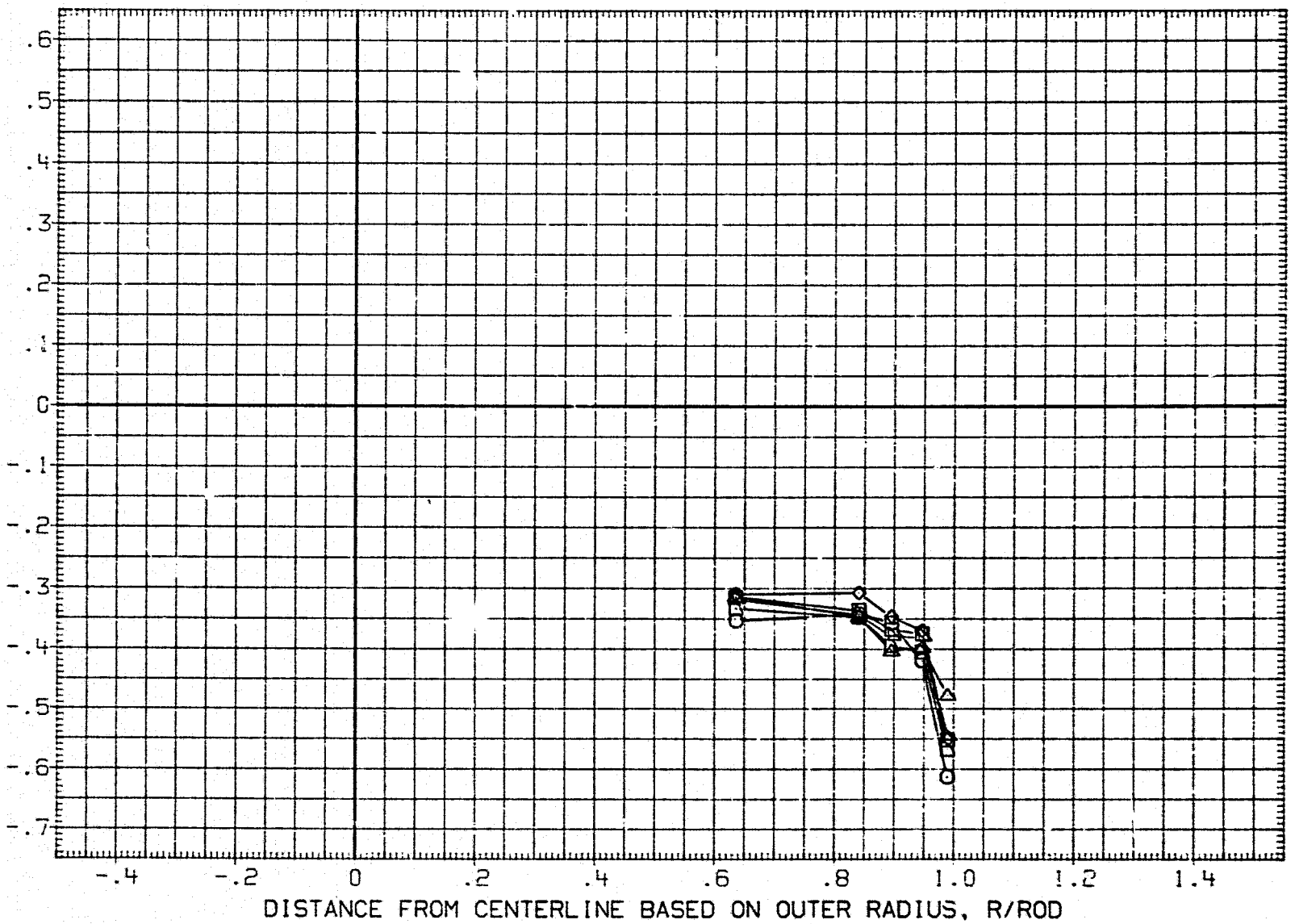


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = 4.000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H31) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H23) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4H14) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB8) | ◁ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (AE4HB3) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |

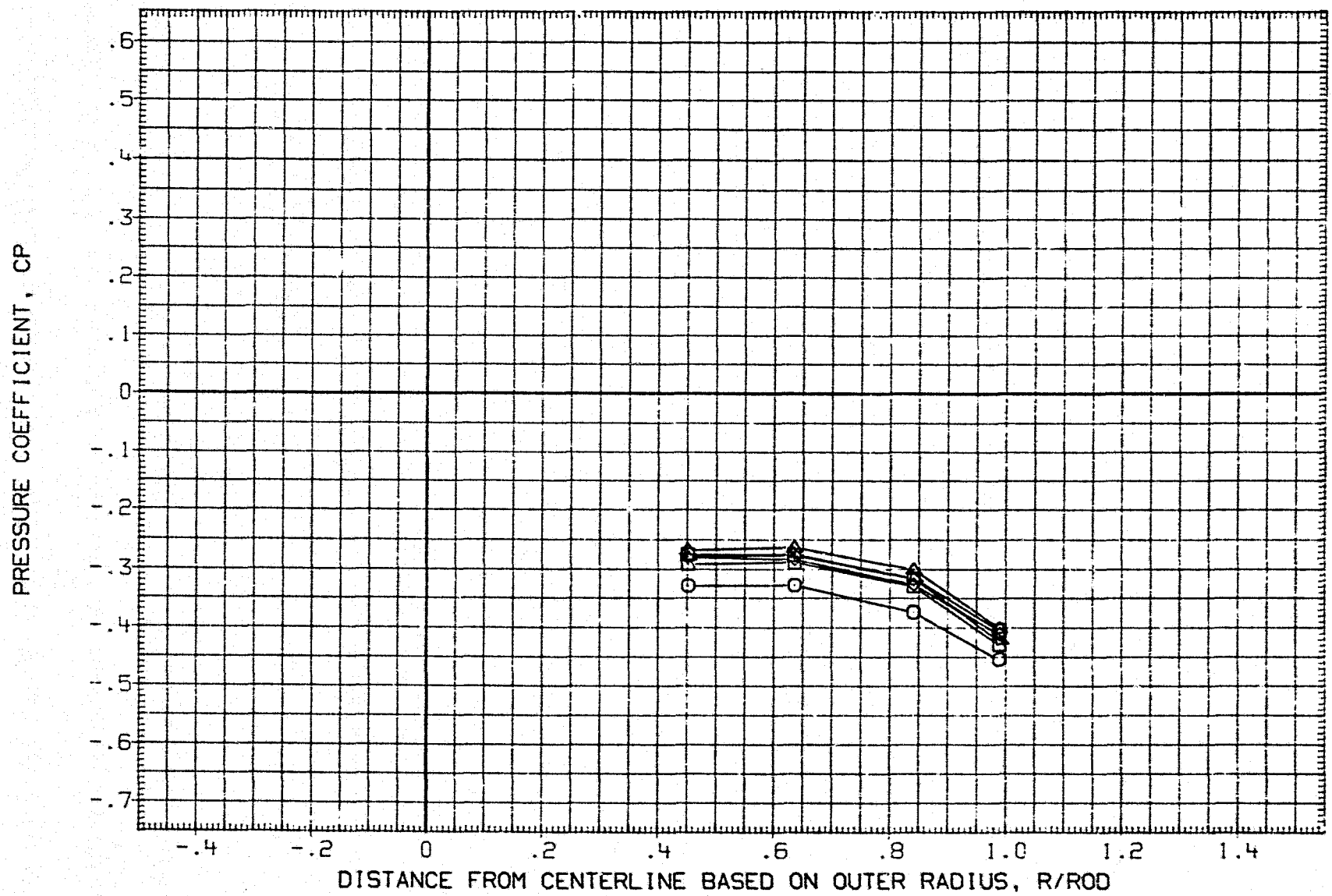


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = 4.000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H31) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H23) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H18) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H14) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H88) | ▽ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H83) | D | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

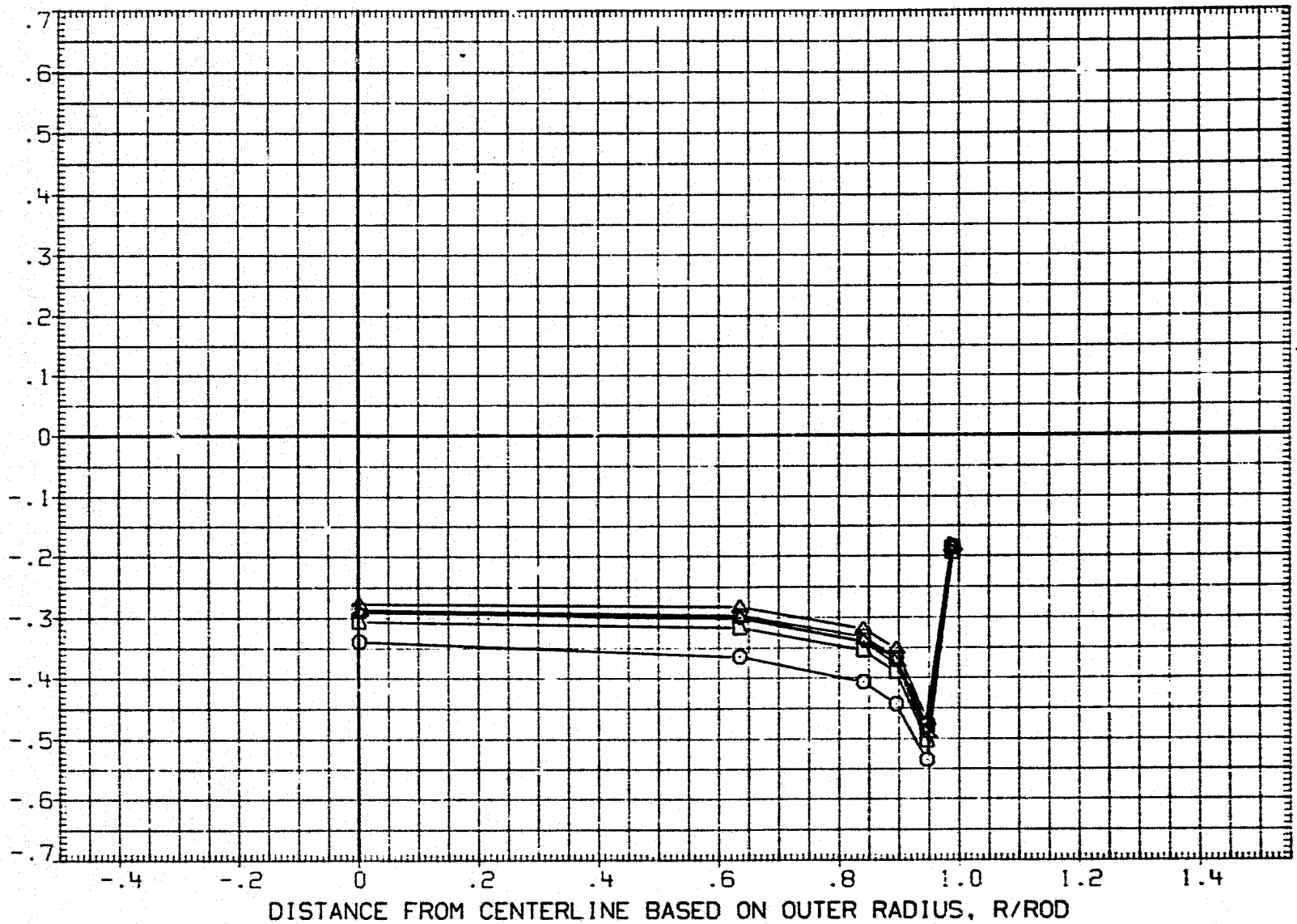


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = -4.000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H31) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H23) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H18) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H14) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H88) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H83) | D | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |

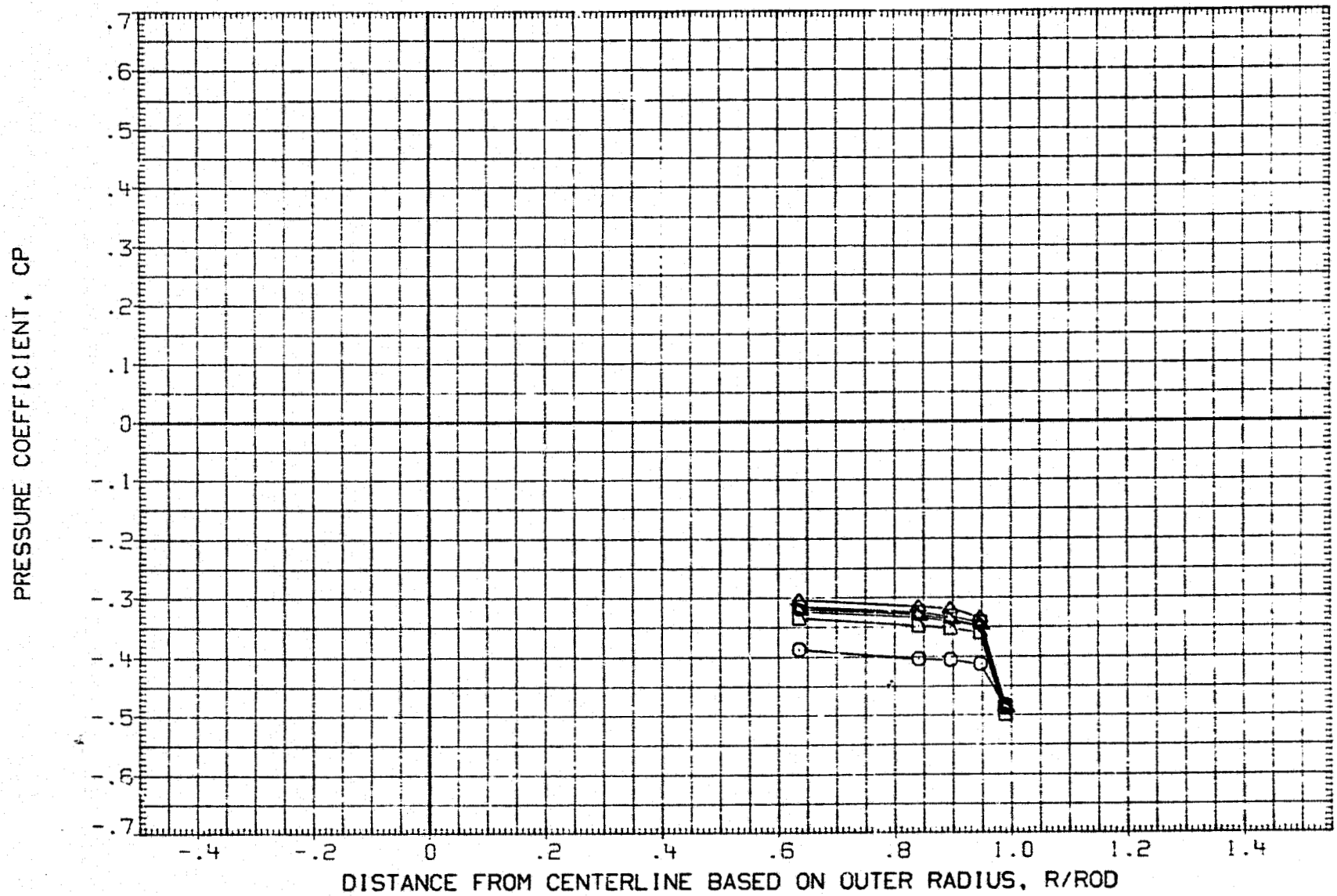


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = -4.000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H31) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H23) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H18) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H14) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4HB8) | ▽ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4HB3) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

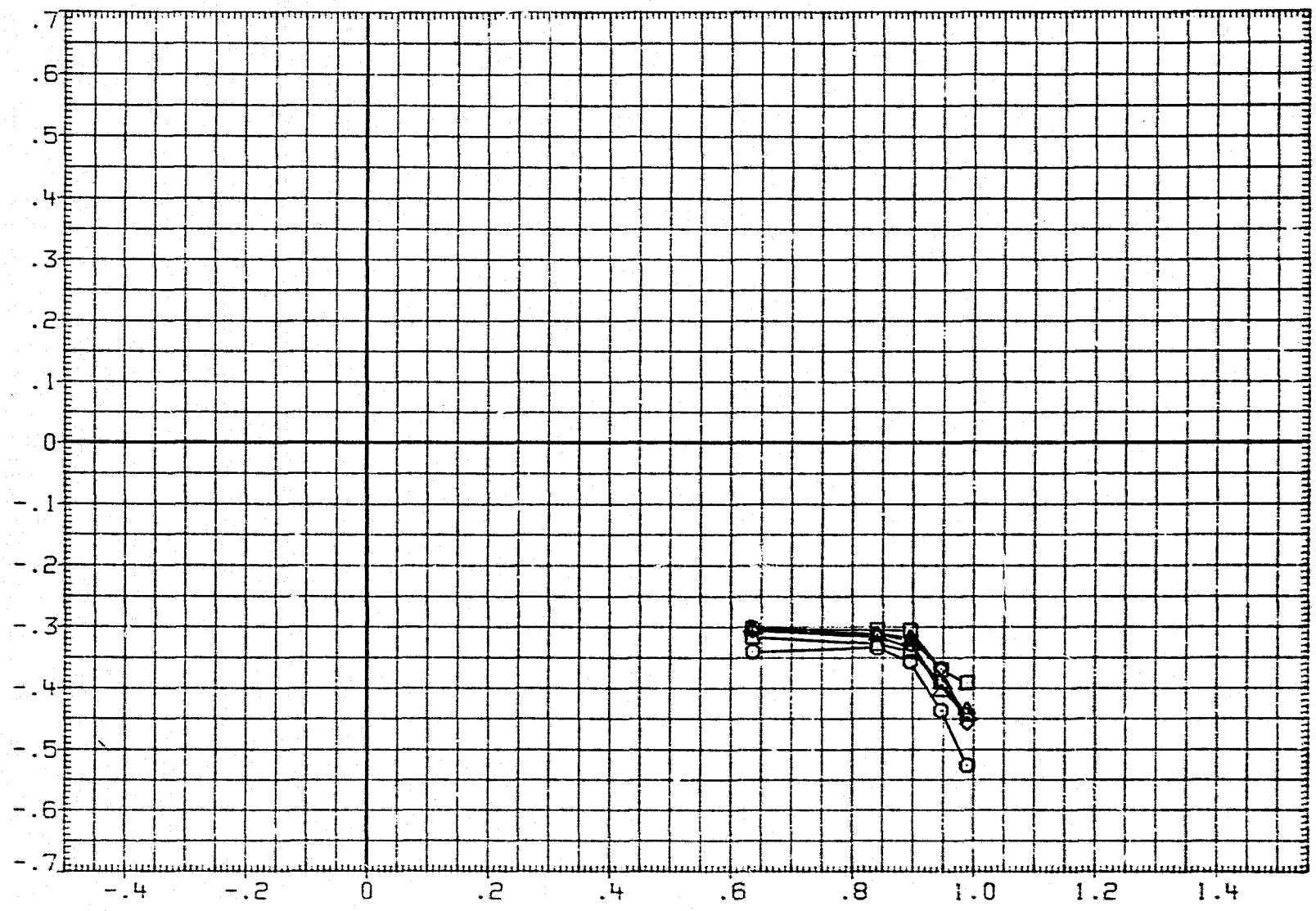


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = -4.000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H31) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H23) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H18) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H14) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4HB8) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4HB3) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

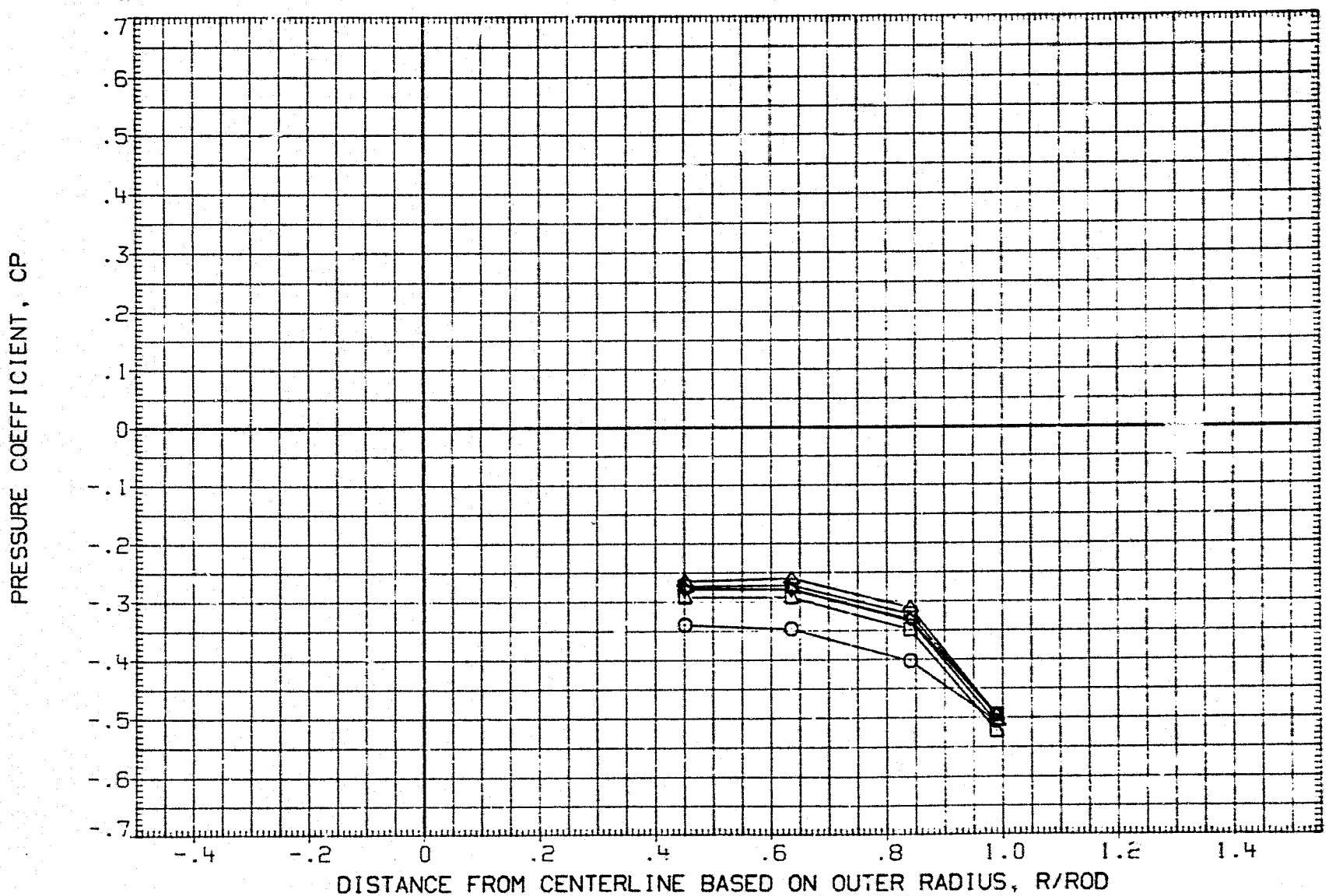


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = -4.000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H31) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H23) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H18) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H14) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4HB8) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4HB3) | D | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |

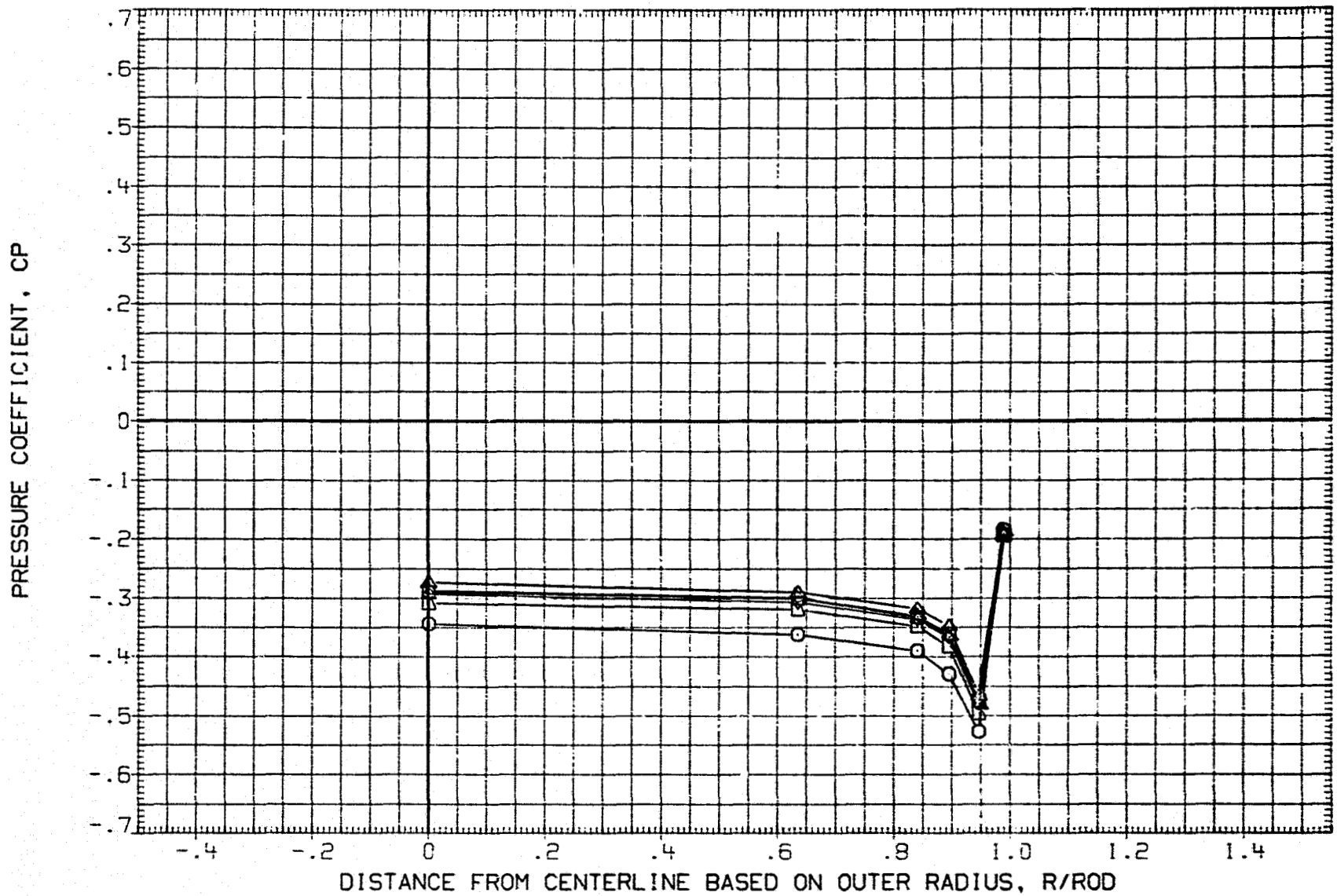


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = 4.000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H31) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H23) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H18) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H14) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H88) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H83) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

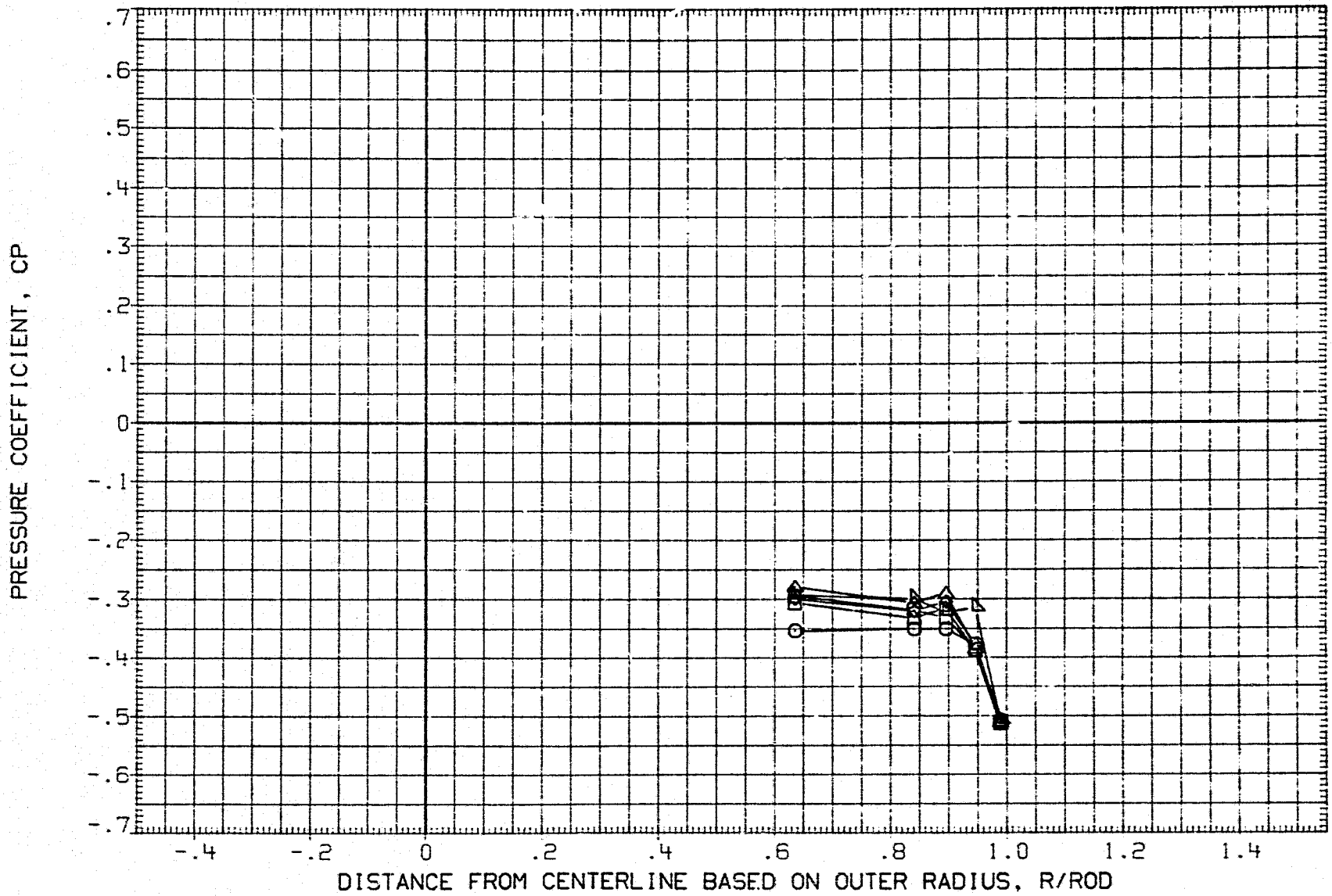


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = 4.000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H31) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H23) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H18) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H14) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4HB8) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4HB3) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.250 | 4.250 |

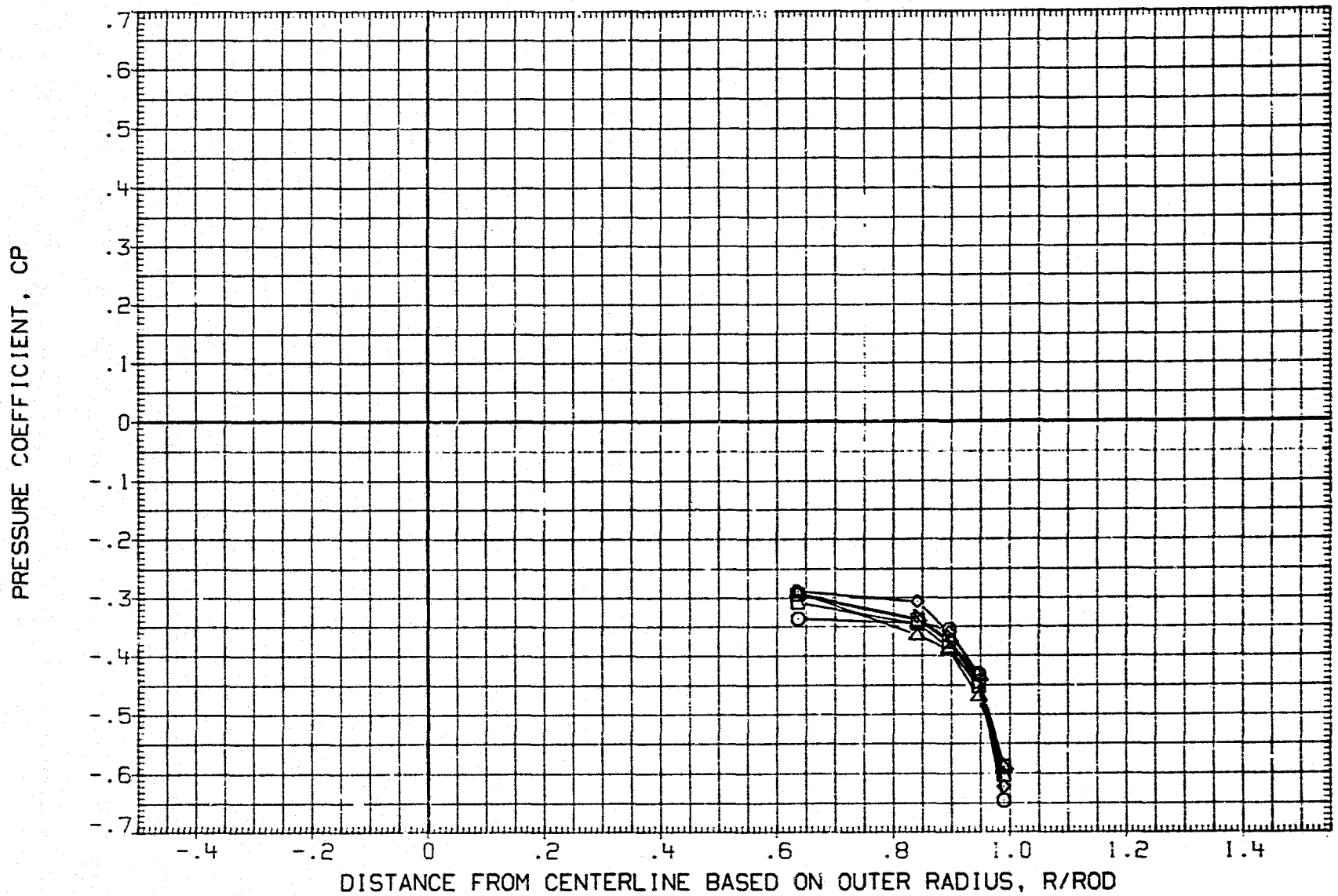


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = 4.000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H31) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H23) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H18) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4H14) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4HB8) | ▽ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |
| (BE4HB3) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.250 | 4.250 |

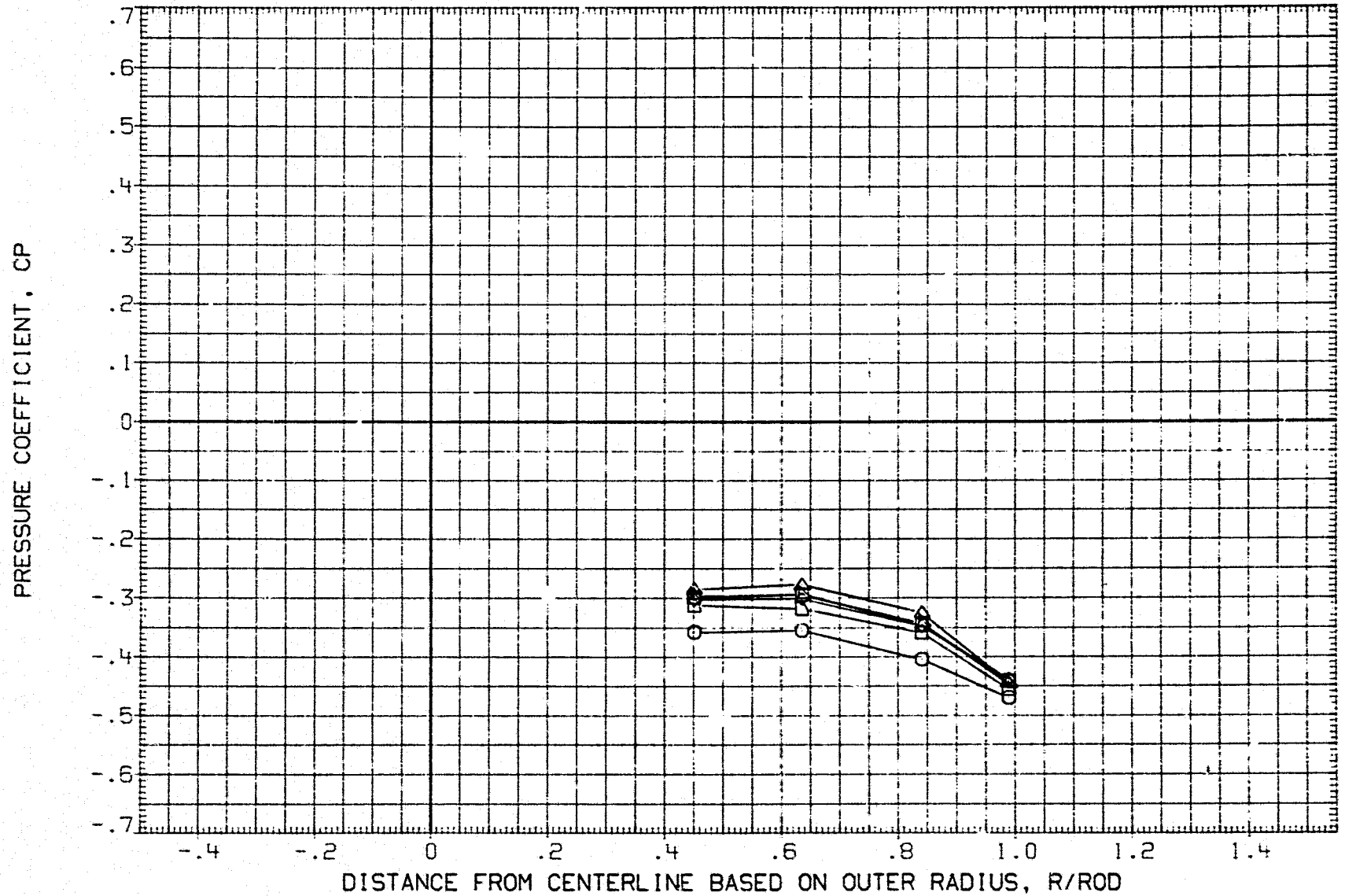


FIG. 13[illegible] PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = 4.000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H25) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H89) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H84) | D | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |

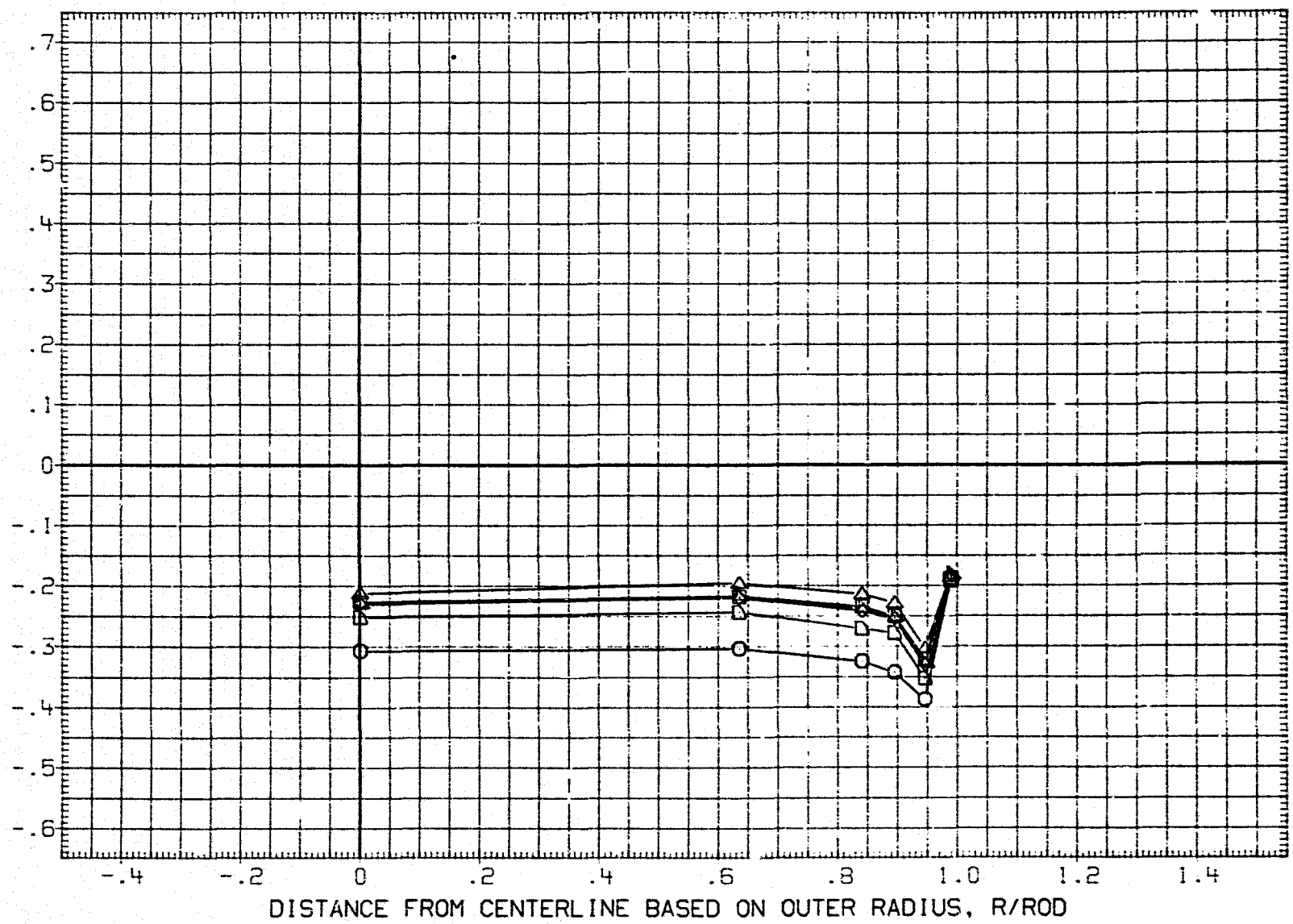


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = -4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB9) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB4) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

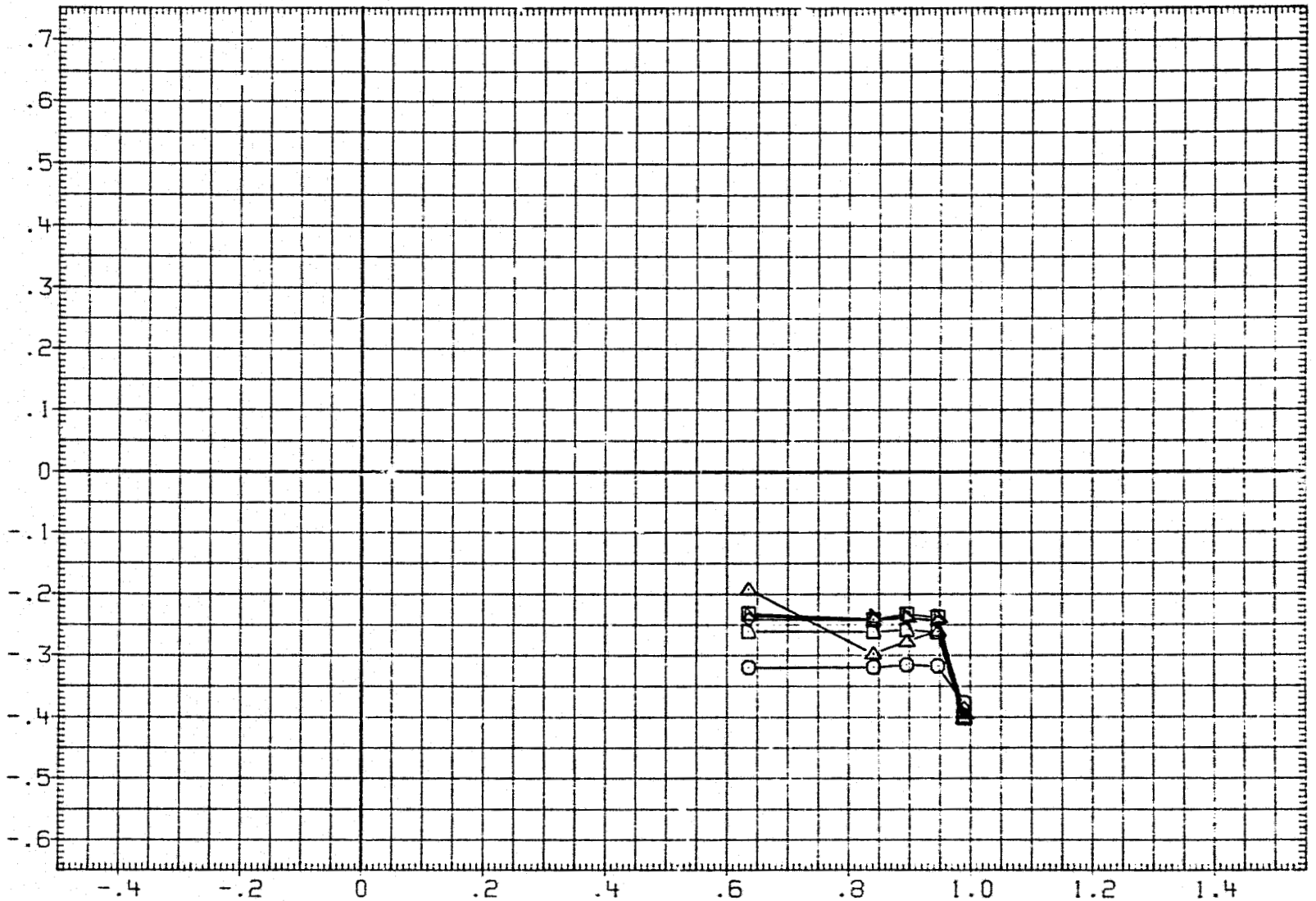


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = -4.000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H89) | ▽ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H84) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

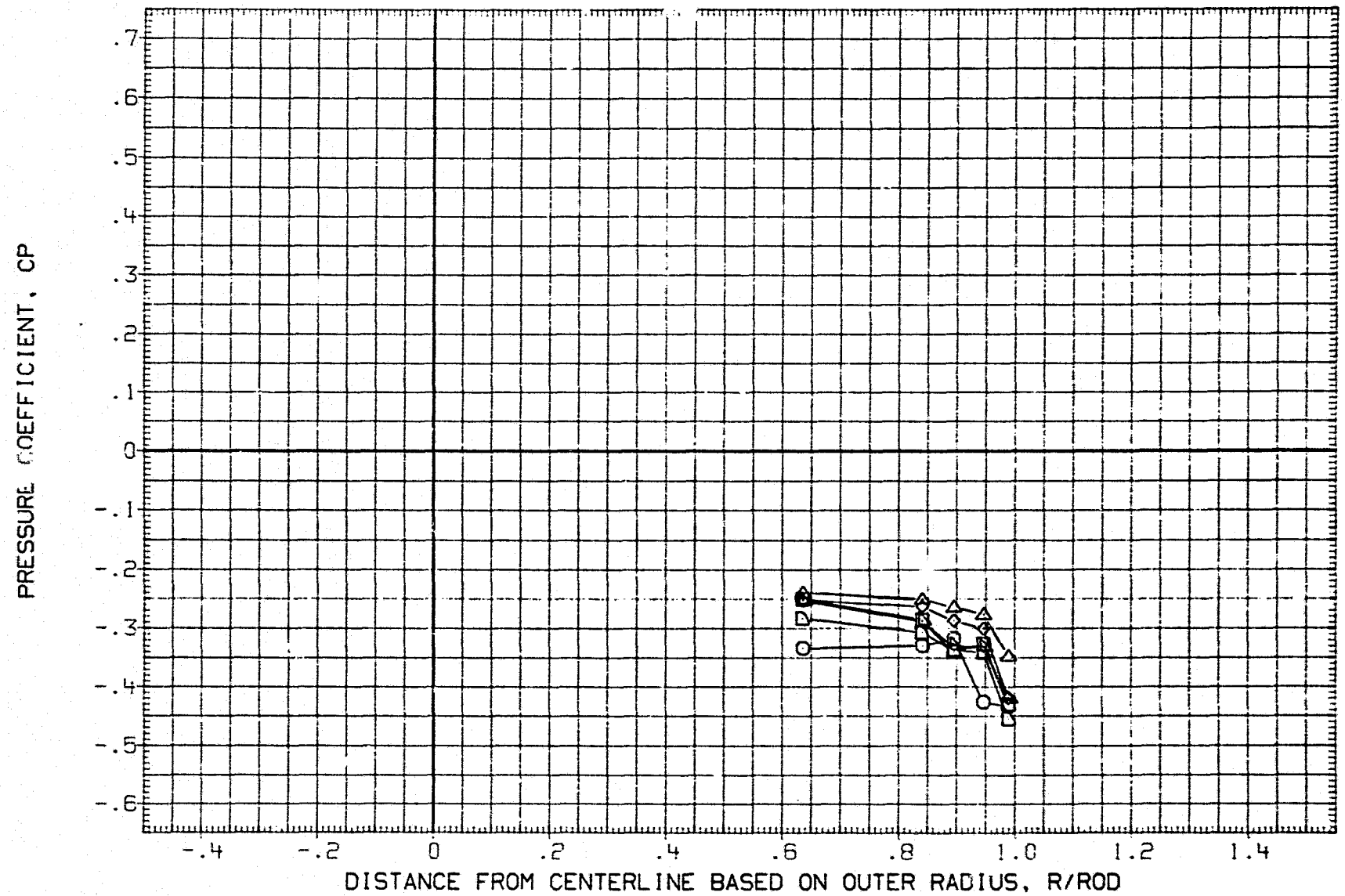


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = -4.000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB9) | ▽ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB4) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |

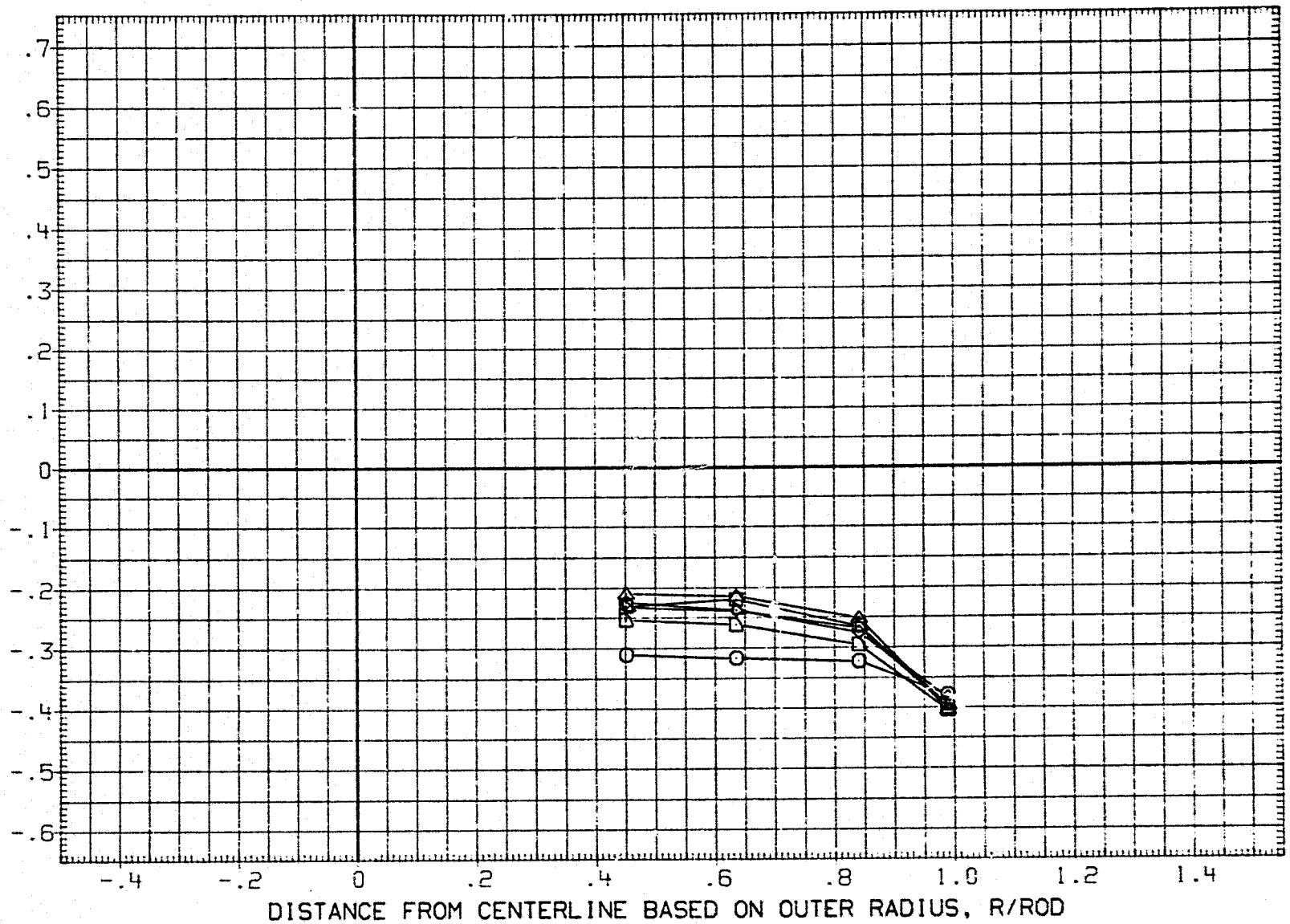


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = -4.000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H89) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H84) | D | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

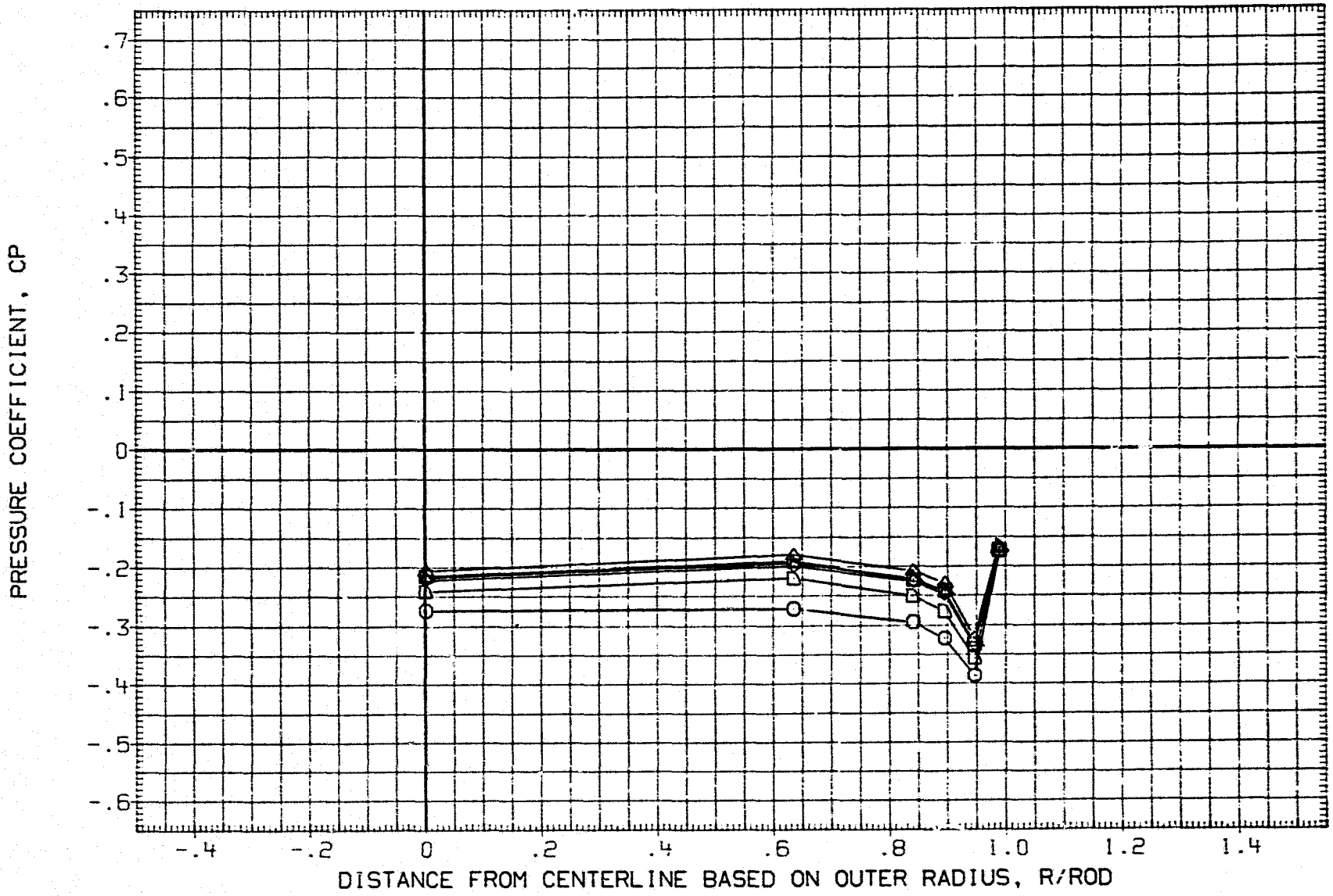


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB9) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB4) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

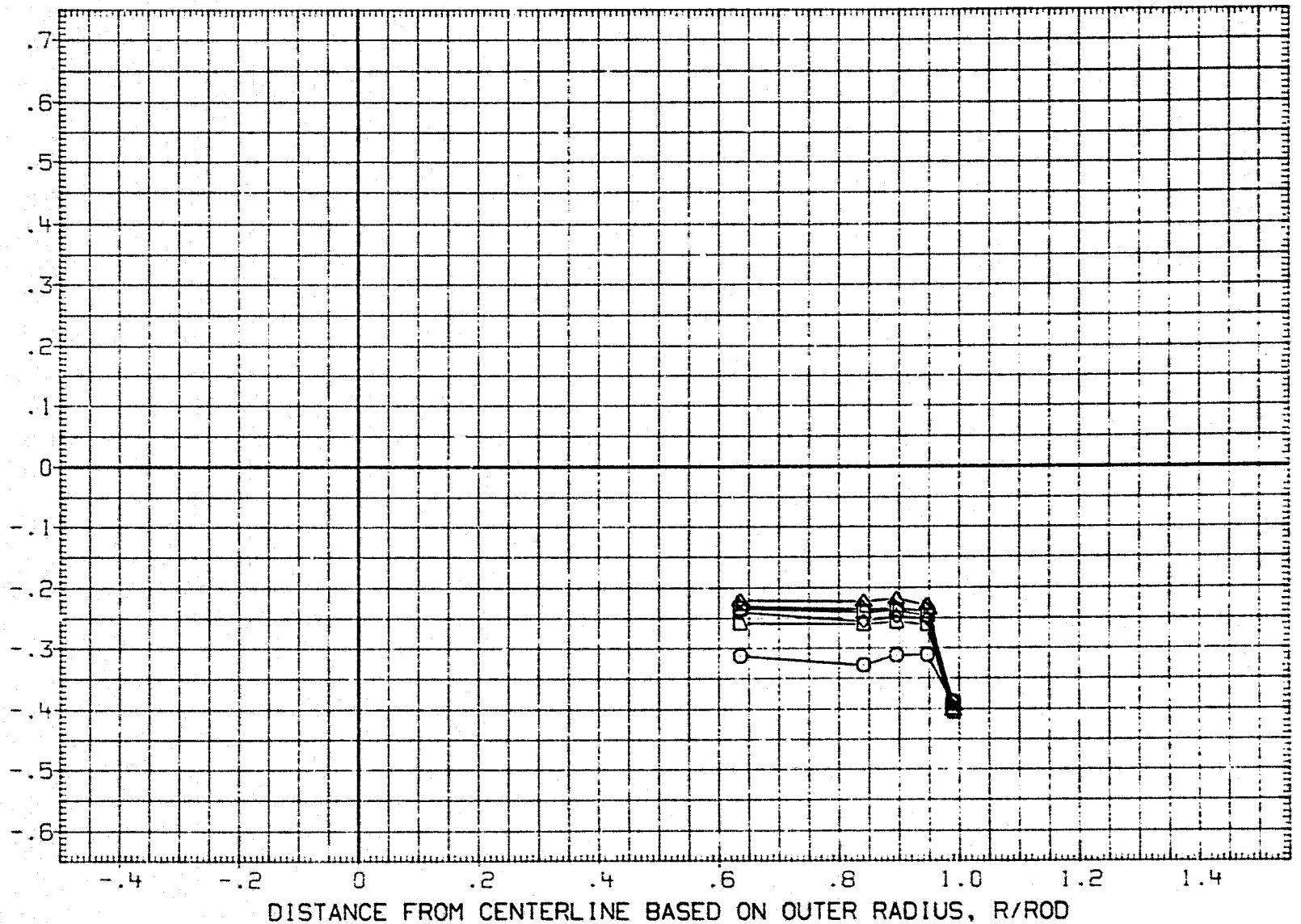


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H89) | ▽ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H84) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |

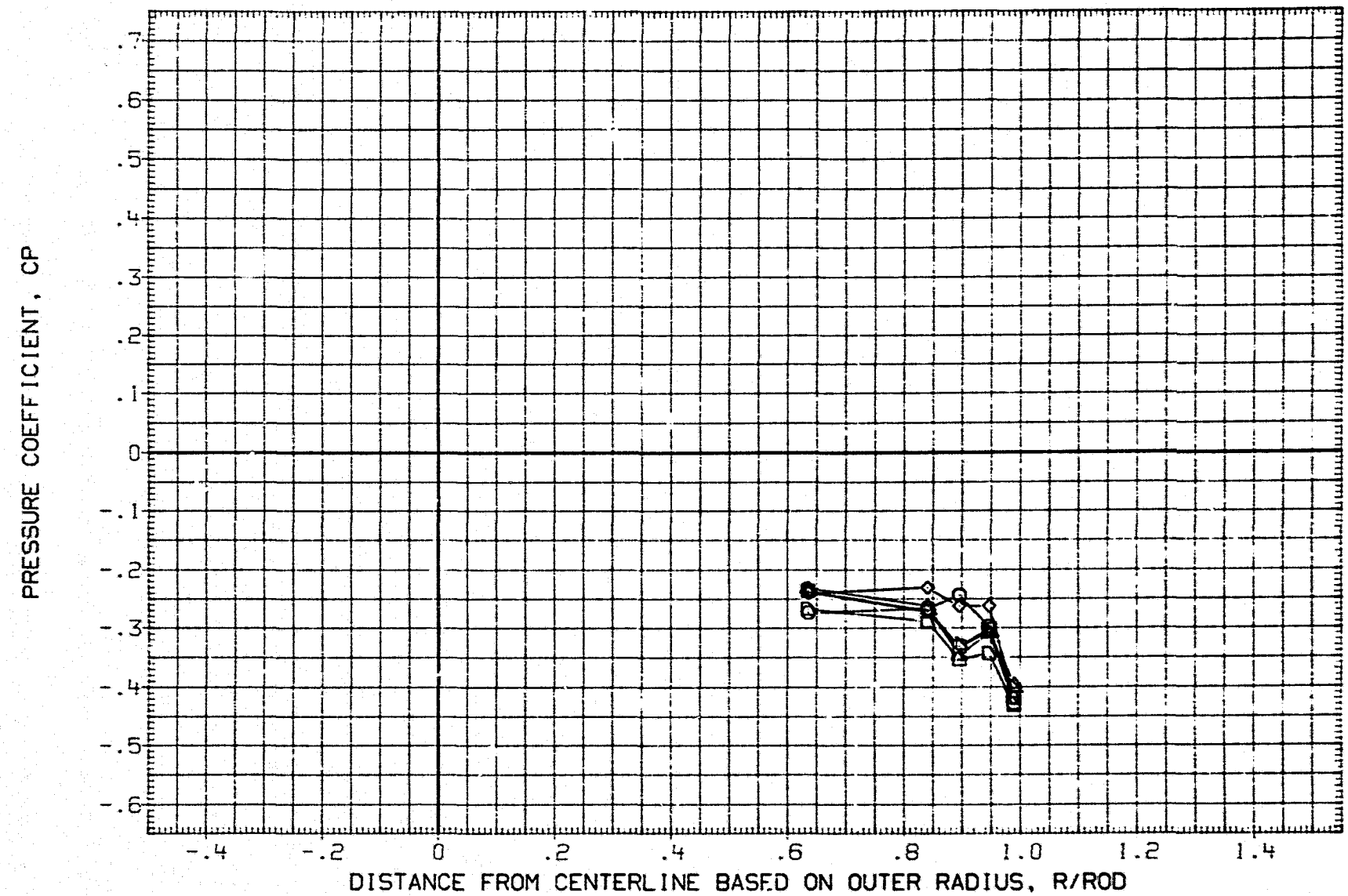


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-023IA80 OTS(SRB=OFF | ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-023IA80 OTS(SRB=N | ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-023IA80 OTS(SRB=N | ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-023IA80 OTS(SRB=N | ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB9) | ▽ | ARC11-023IA80 OTS(SRB=N | ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB4) | ▷ | ARC11-023IA80 OTS(SRB=N | ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

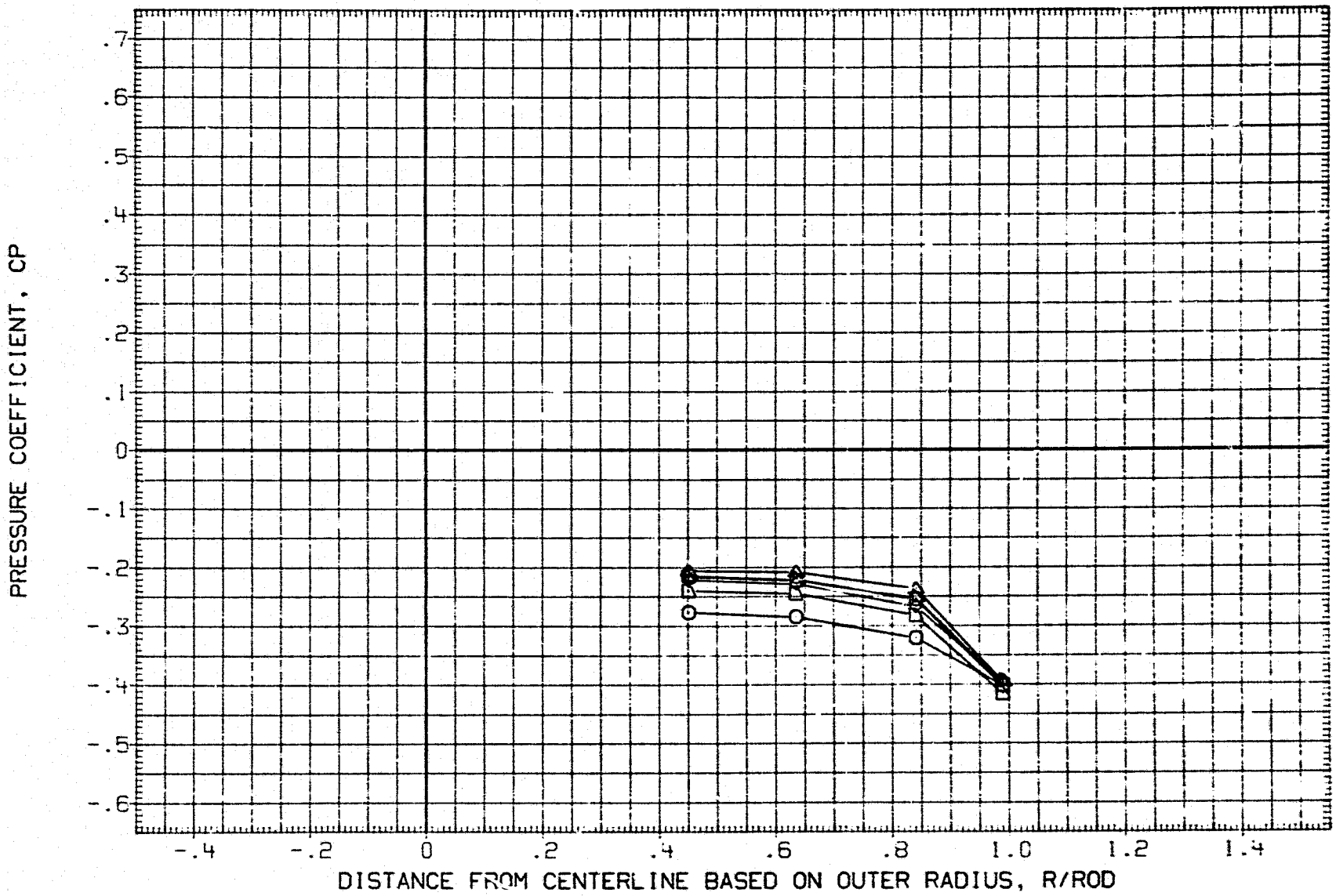


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB9) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB4) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

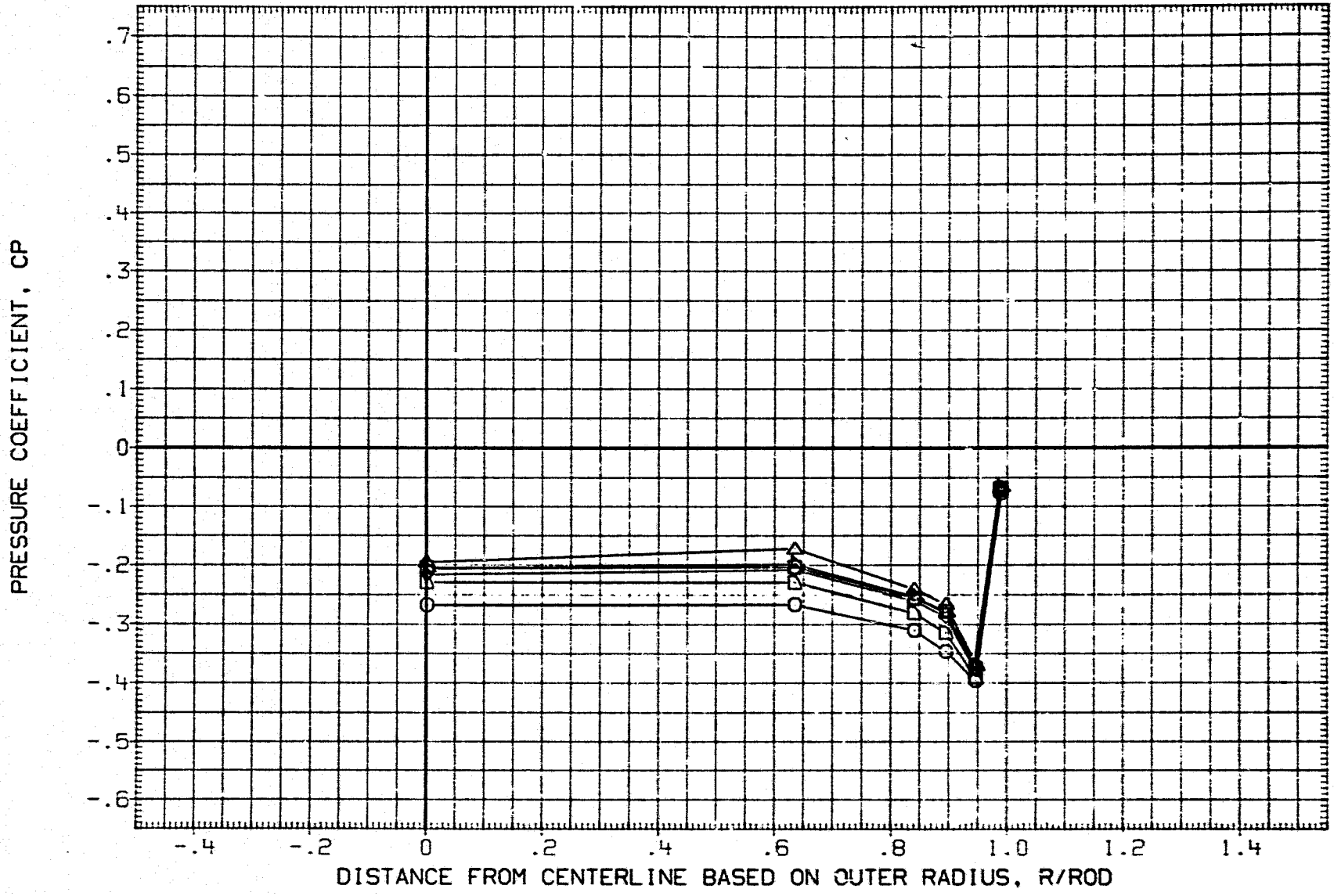


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = 4.000 BETA = .000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB9) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB4) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

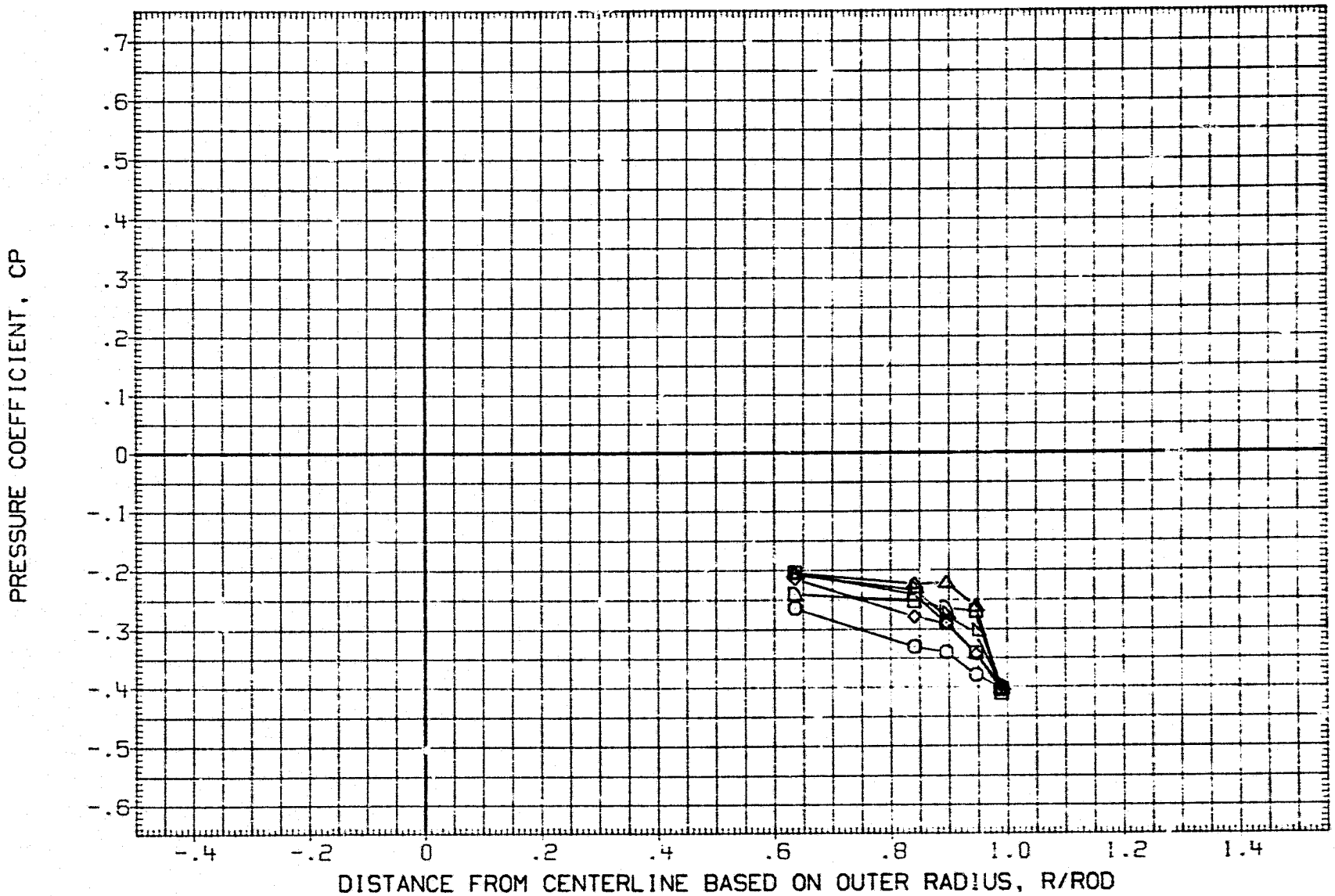


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = 4.000 BETA = .000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB9) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB4) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

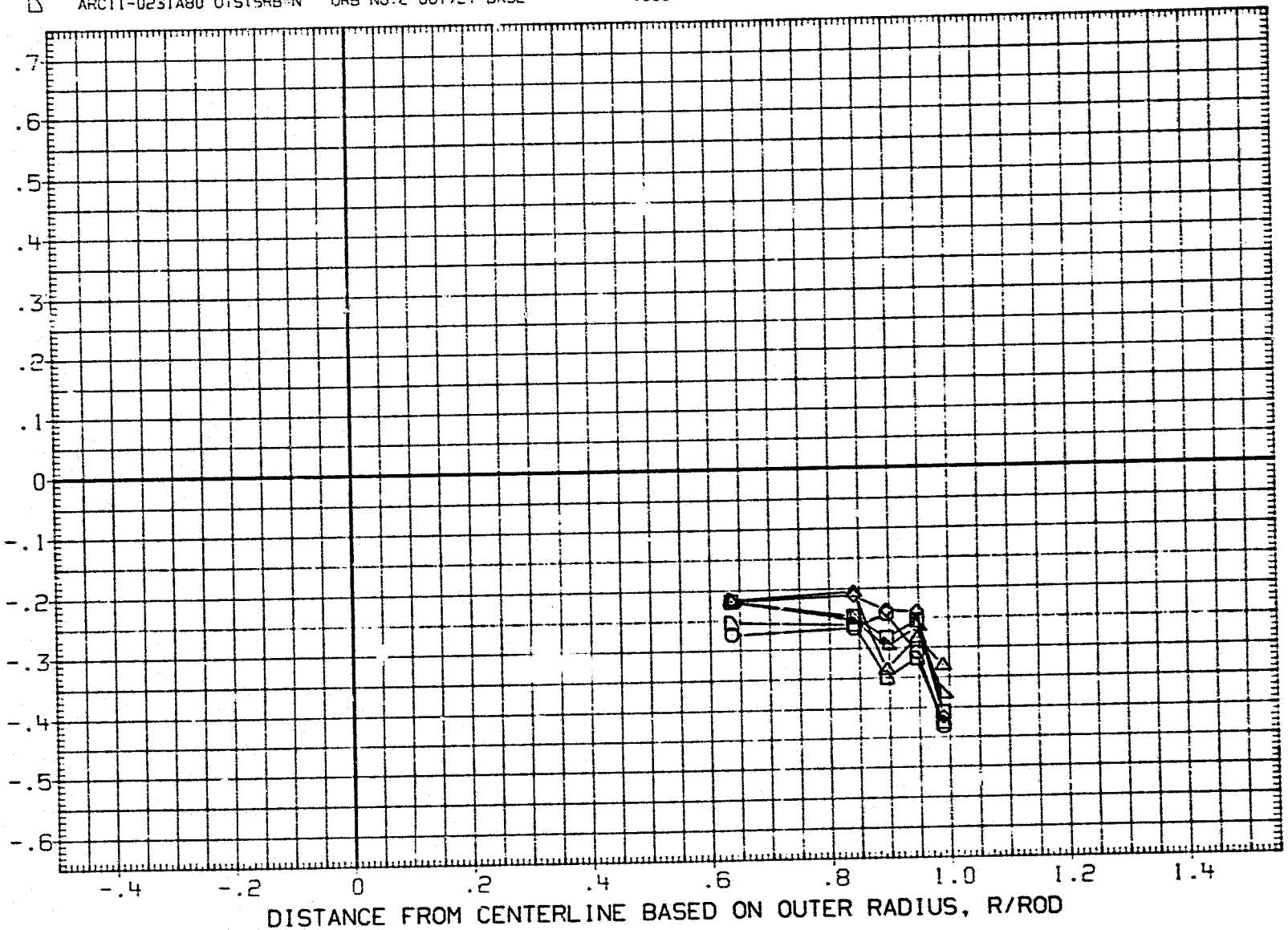


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = 4.000 BETA = .000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (AE4H32) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H24) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4H15) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB9) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (AE4HB4) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

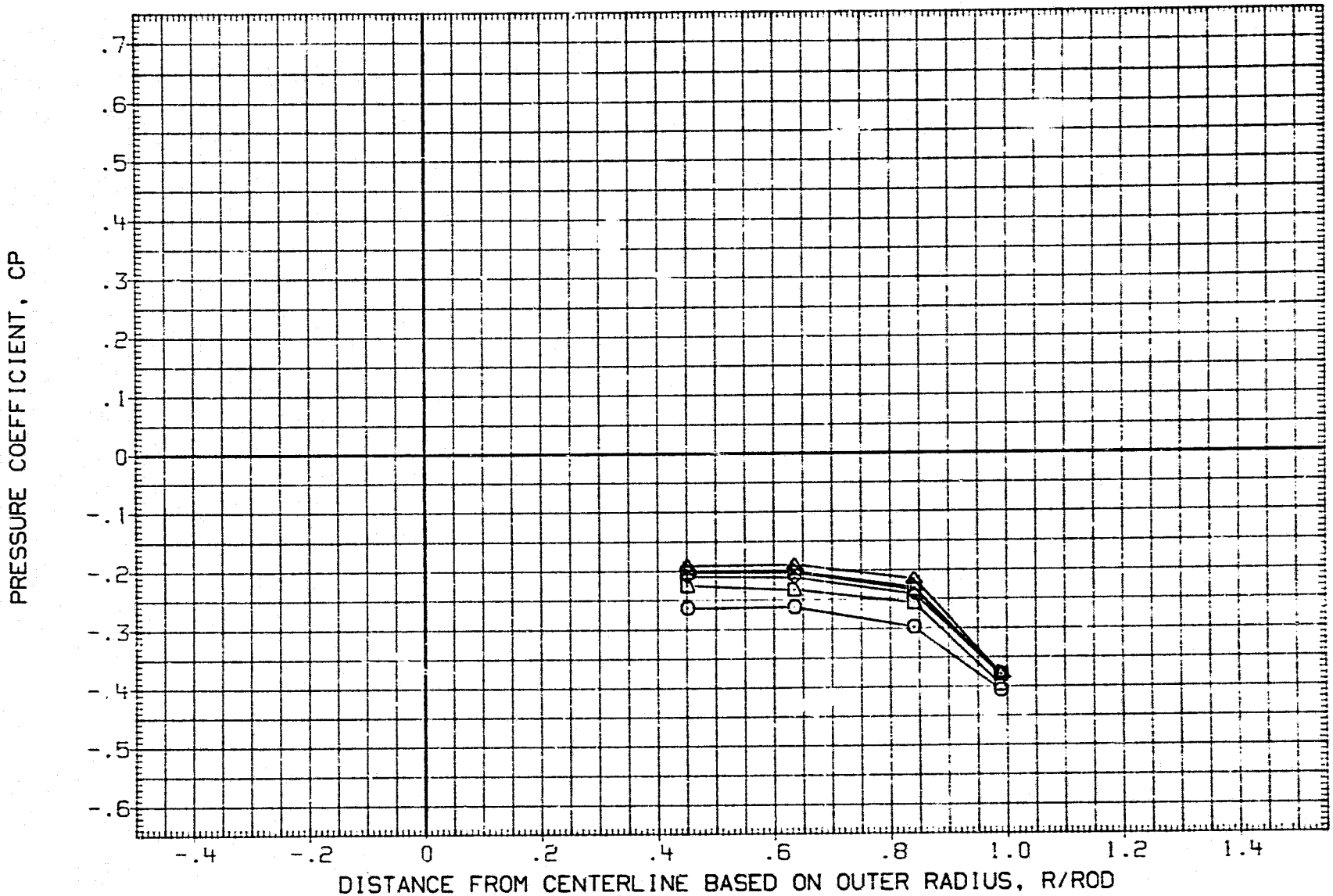


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = 4.000 BETA = .000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H32) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) [illegible] BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H24) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H19) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H15) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H89) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H84) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

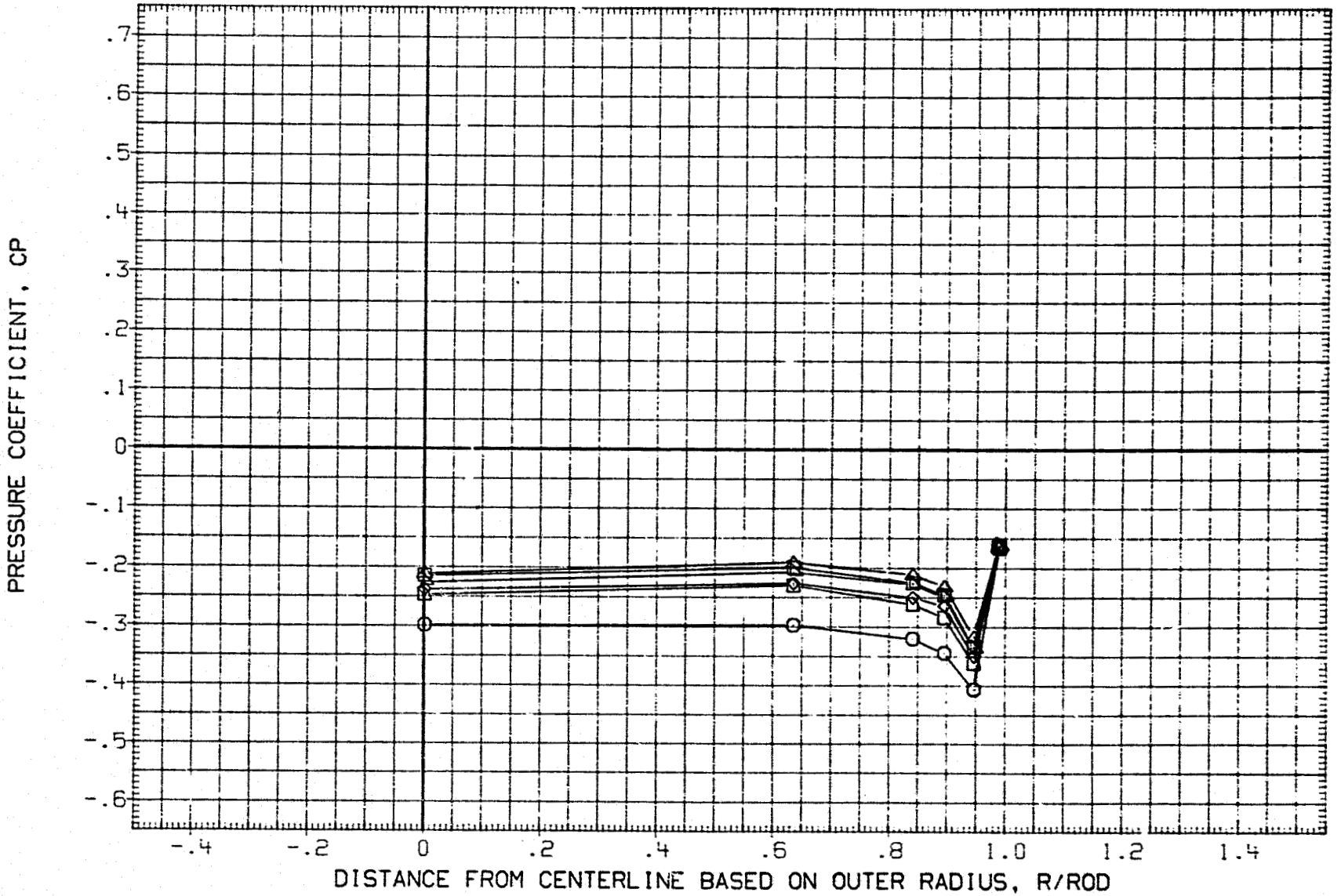


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = -4.000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H32) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H24) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H19) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H15) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H39) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H84) | ▱ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |

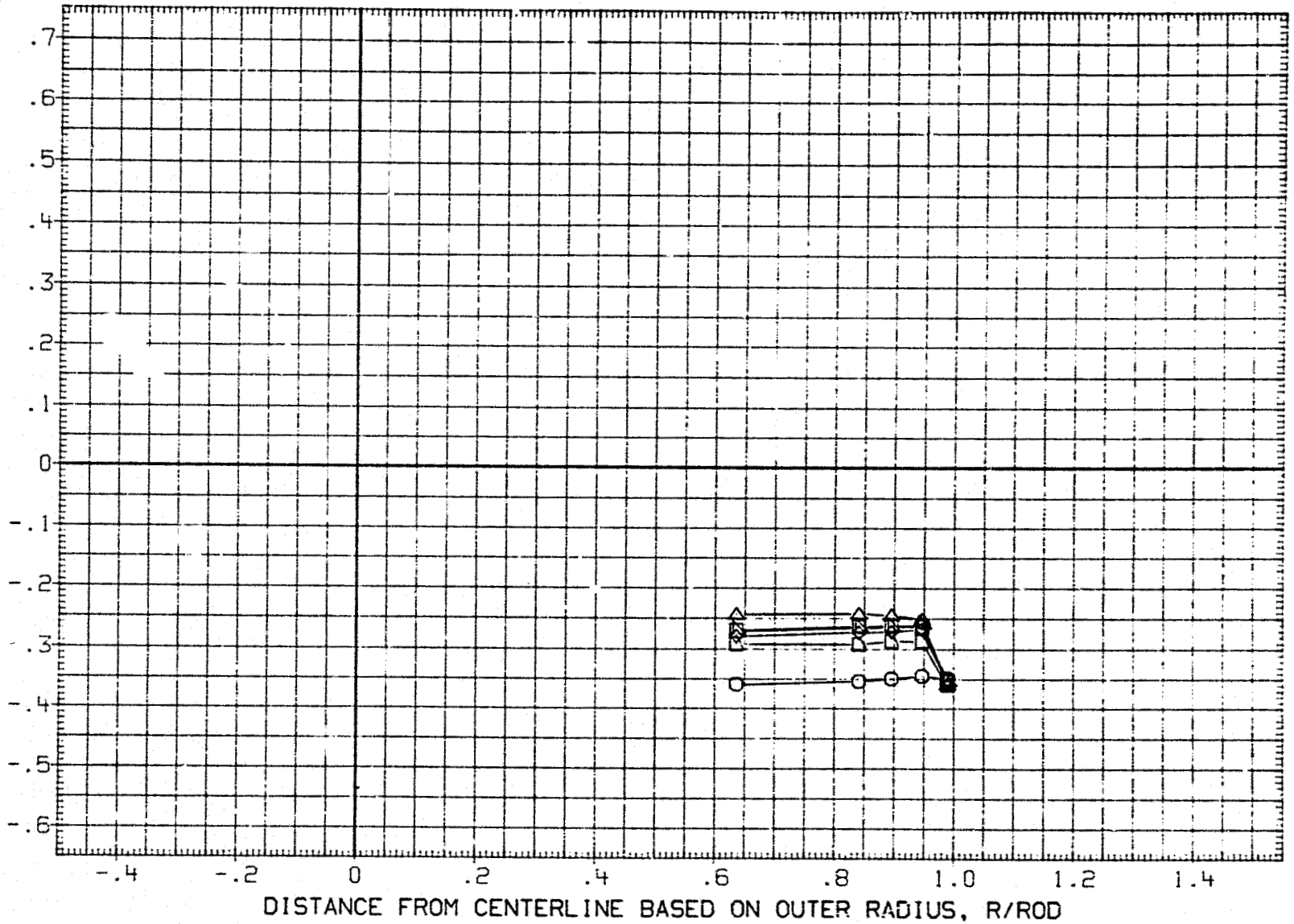


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = -4.000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H32) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H24) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H19) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H15) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4HB9) | ▽ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4HB4) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |

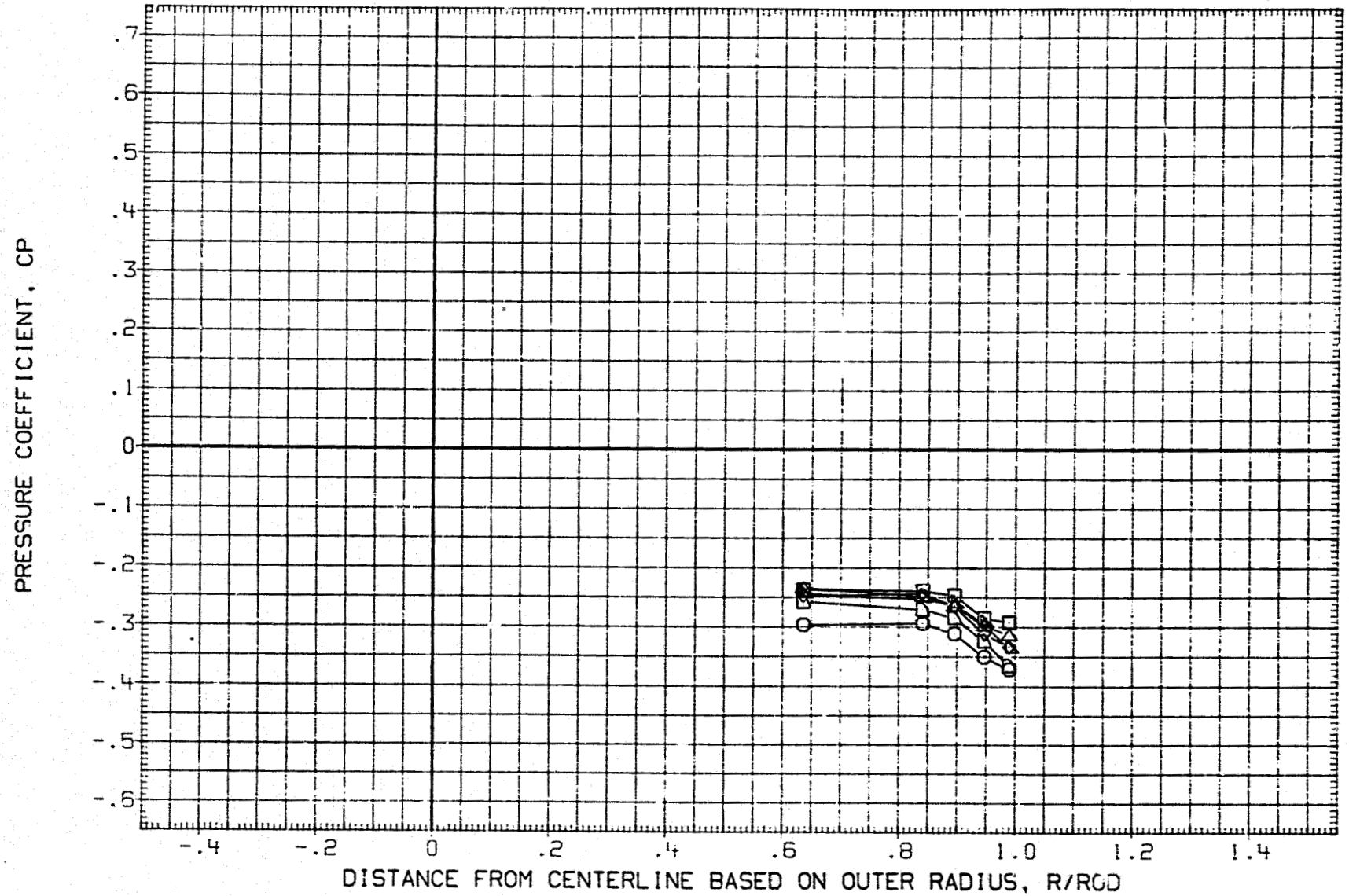


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = -4.000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H32) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H24) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H19) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H15) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4HB9) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4HB4) | D | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

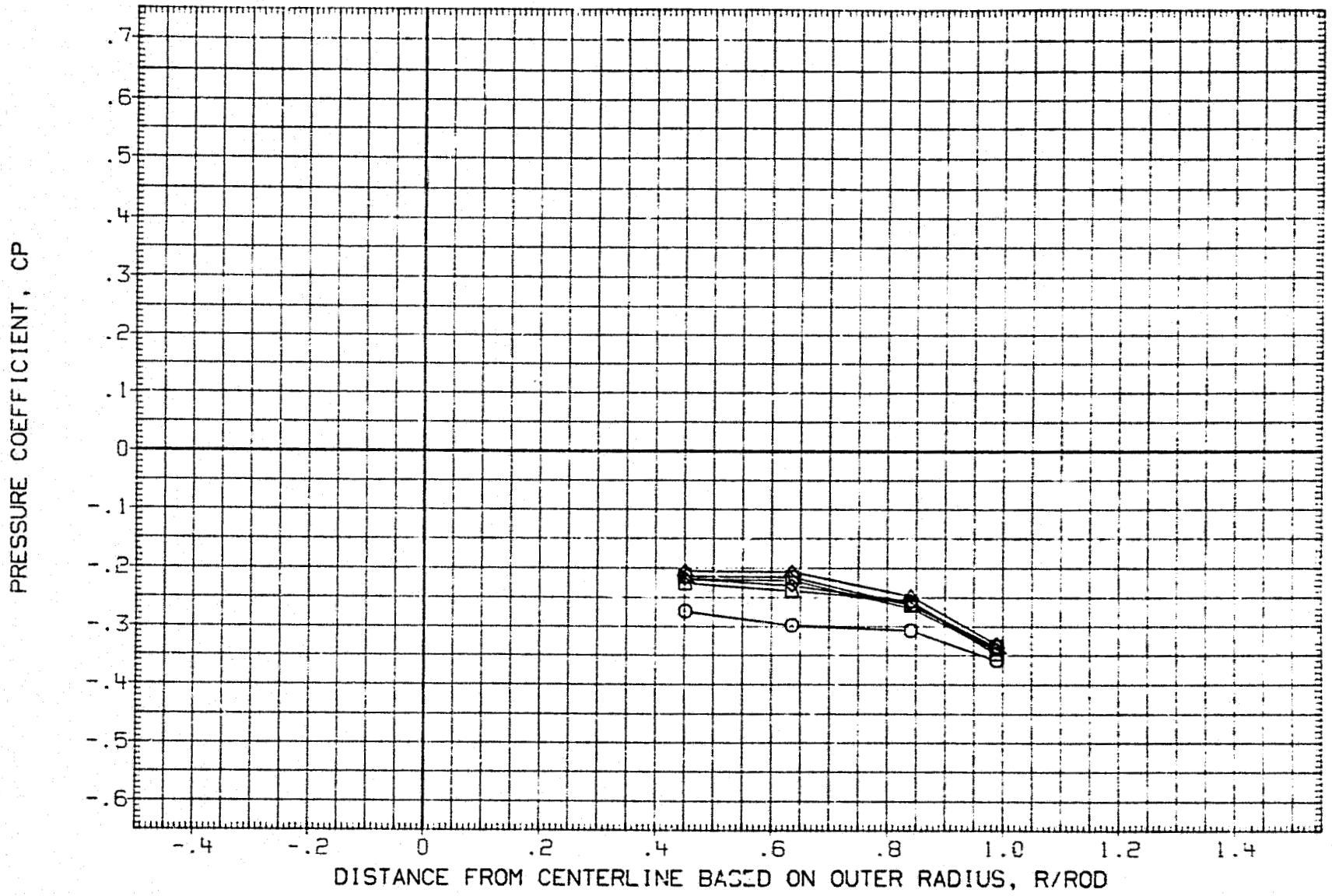


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = -4.000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H32) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H24) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H15) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4HB9) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4HB4) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |

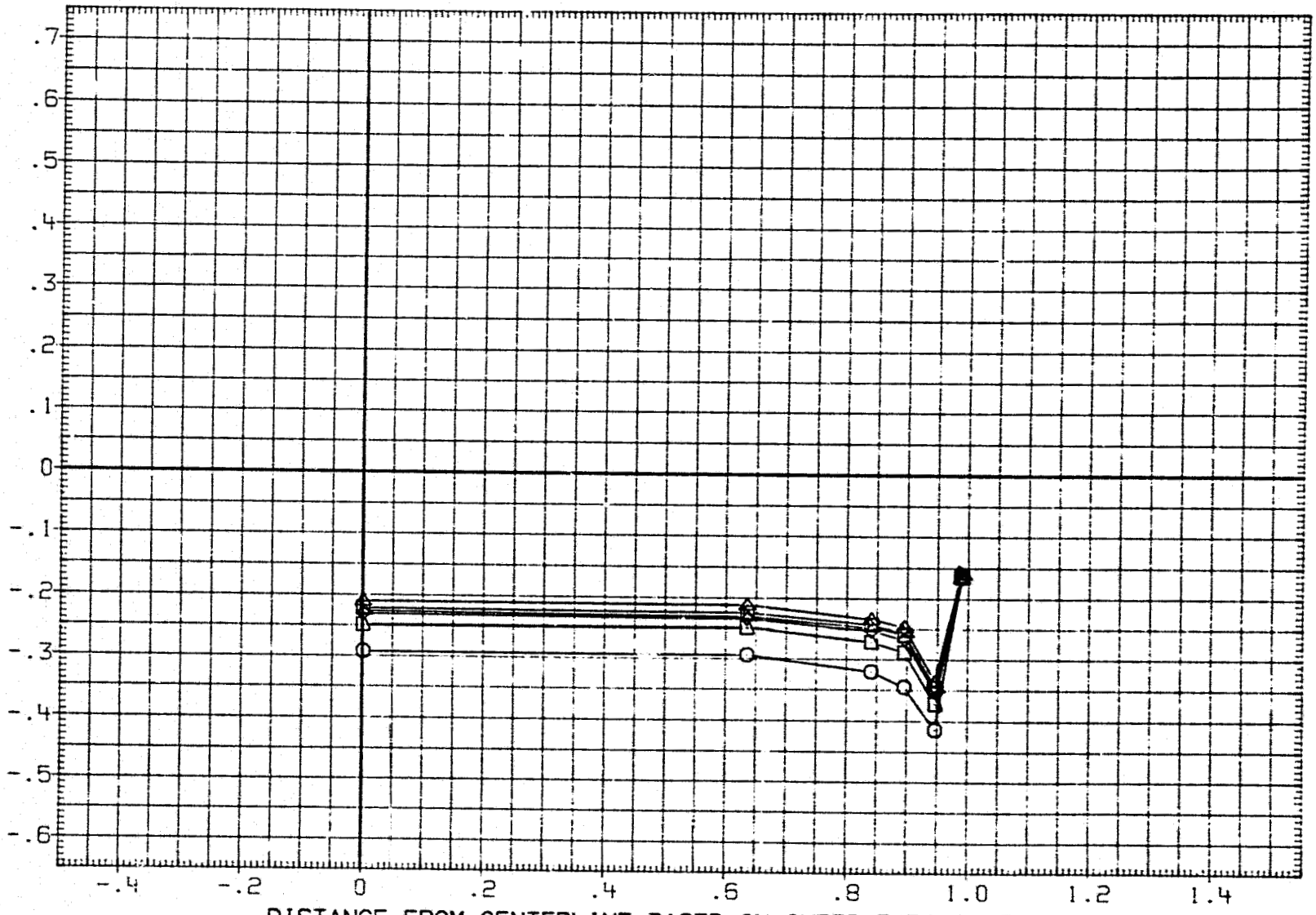


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = 4.000 PHI = .000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|
| (BE4H32) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H24) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H19) | ◇ | ARC11-023IA80 OTS(SRB=N ORB=N- ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H15) | △ | ARC11-023IA80 OTS(SRB=N ORB=N+ ) ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H99) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.1 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H84) | ▷ | ARC11-023IA80 OTS(SRB=N ORB NO.2 OUT)ET BASE | .000 | .000 | 1.400 | 4.250 |

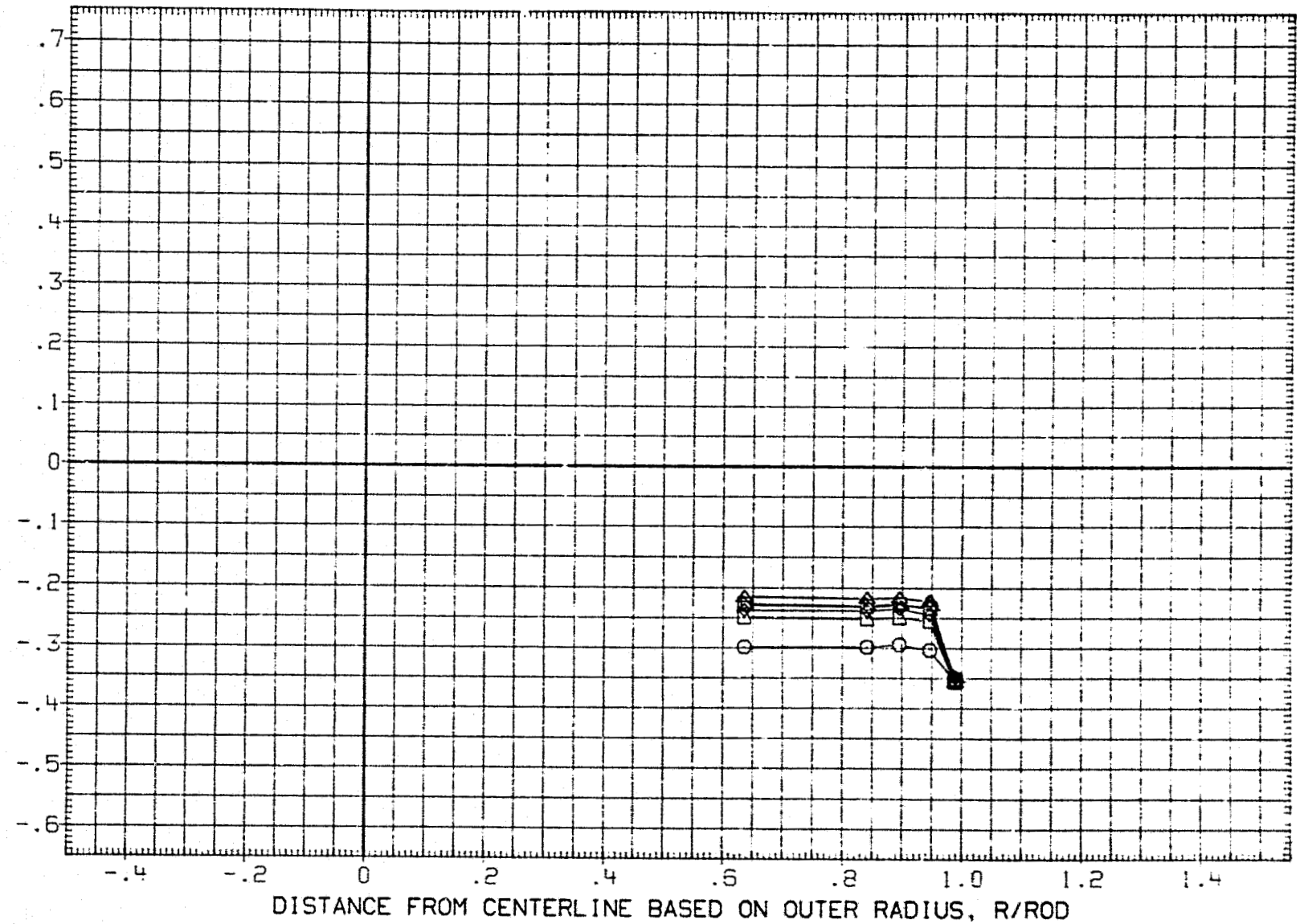


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = 4.000 PHI = 90.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|---|
| (BE4H32) | ○ | ARC11-0231A80 OTS(SRB=OFF | ORB=OFF) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H24) | □ | ARC11-0231A80 OTS(SRB=N | ORB=N ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N | ORB=N- ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H15) | △ | ARC11-0231A80 OTS(SRB=N | ORB=N+ ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H89) | ▷ | ARC11-0231A80 OTS(SRB=N | ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H84) | D | ARC11-0231A80 OTS(SRB=N | ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |

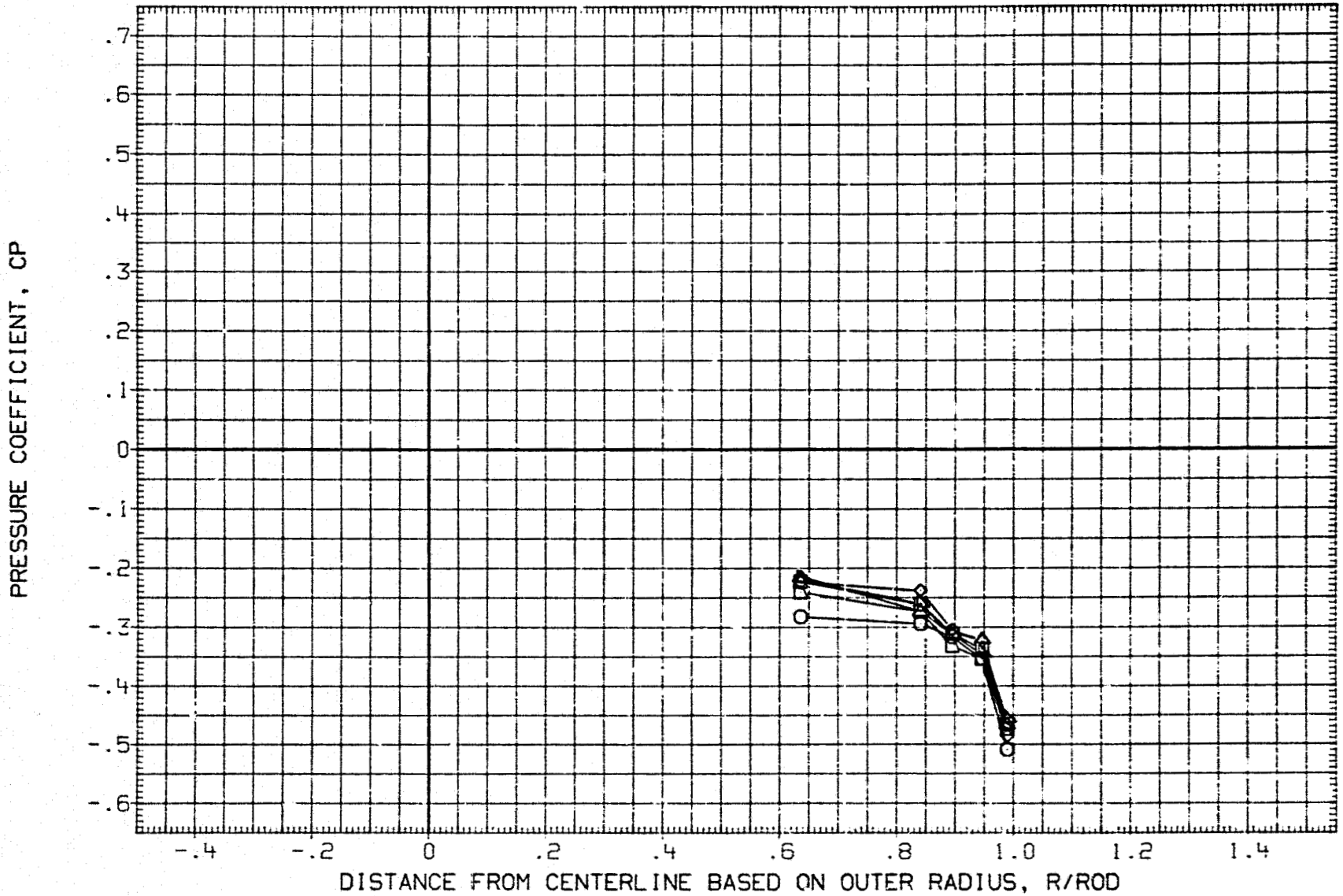


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = 4.000 PHI = 180.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4H32) | ○ | ARC11-0231A80 OTS(SRB-OFF ORB=OFF) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H24) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H19) | ◇ | ARC11-0231A80 OTS(SRB=N ORB=N- ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H15) | △ | ARC11-0231A80 OTS(SRB=N ORB=N+ ) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H89) | ▷ | ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |
| (BE4H84) | D | ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) | ET BASE | .000 | .000 | 1.400 | 4.250 |

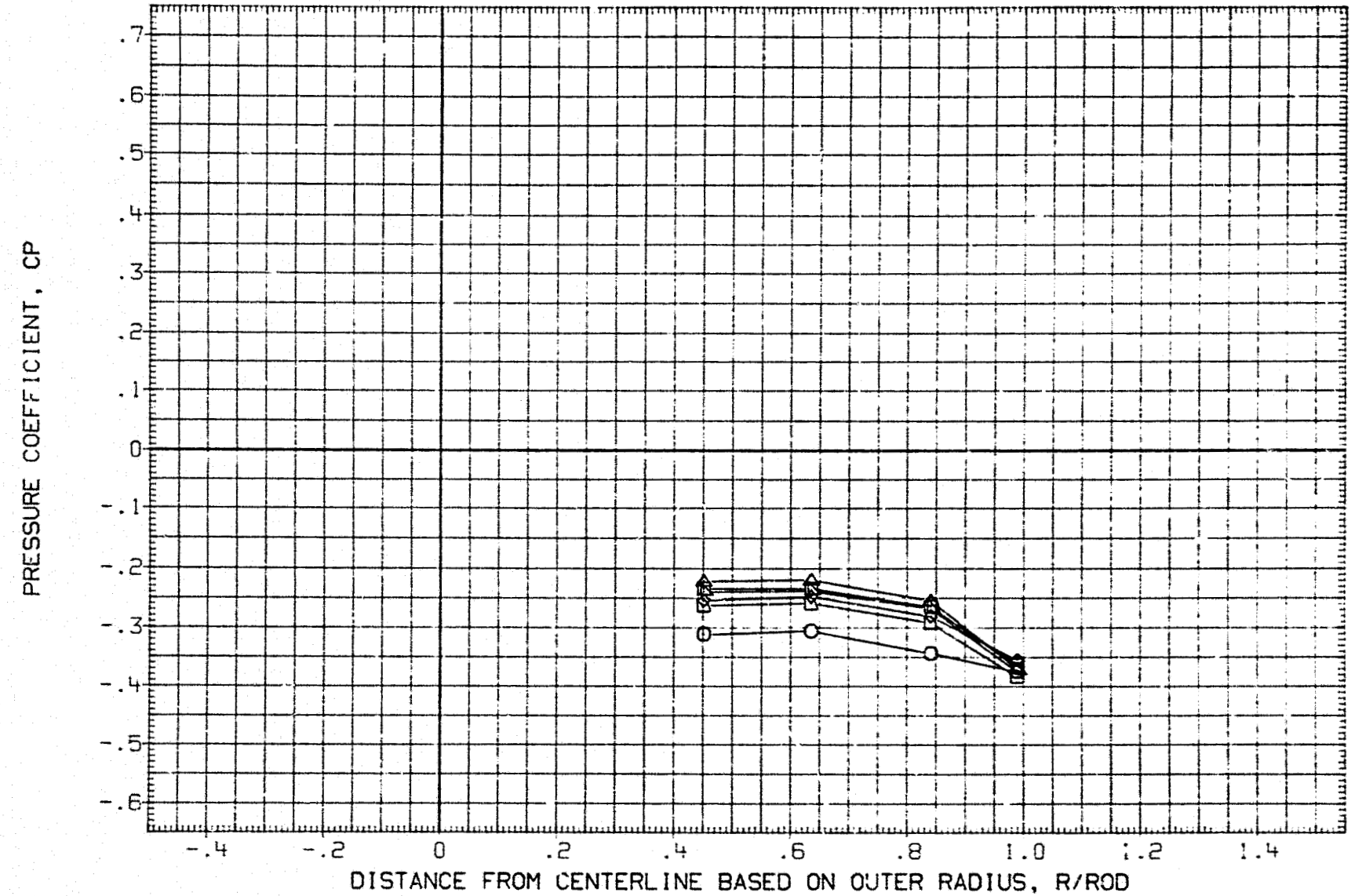


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = 4.000 PHI = 270.000

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4128) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (AE4120) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (AE4106) | ◇ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (AE4101) | △ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |

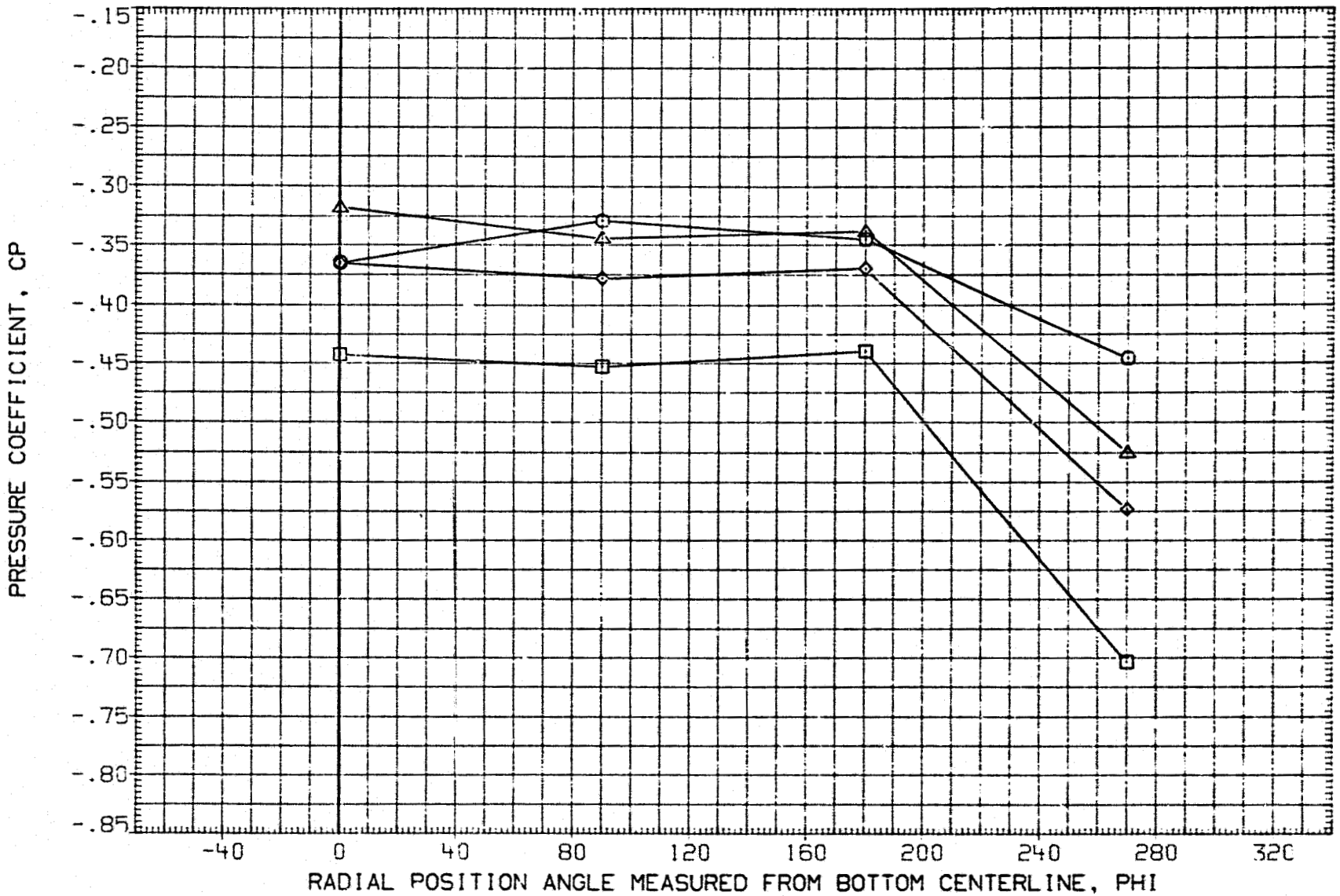


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = -4.000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4128) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (AE4120) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (AE4106) | ◇ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (AE4101) | △ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |

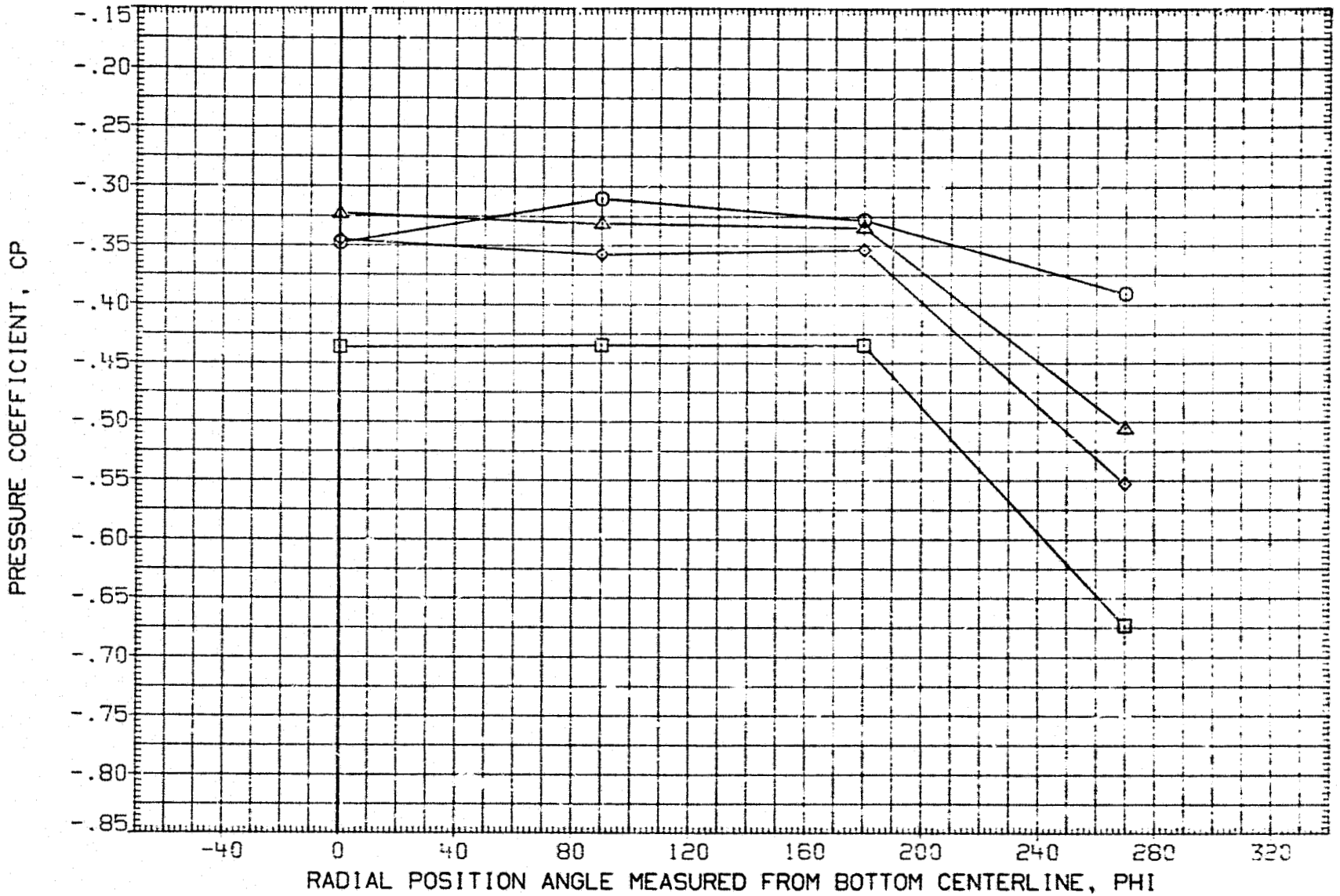


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = .000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4128) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (AE4120) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (AE4106) | ◇ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (AE4101) | △ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |

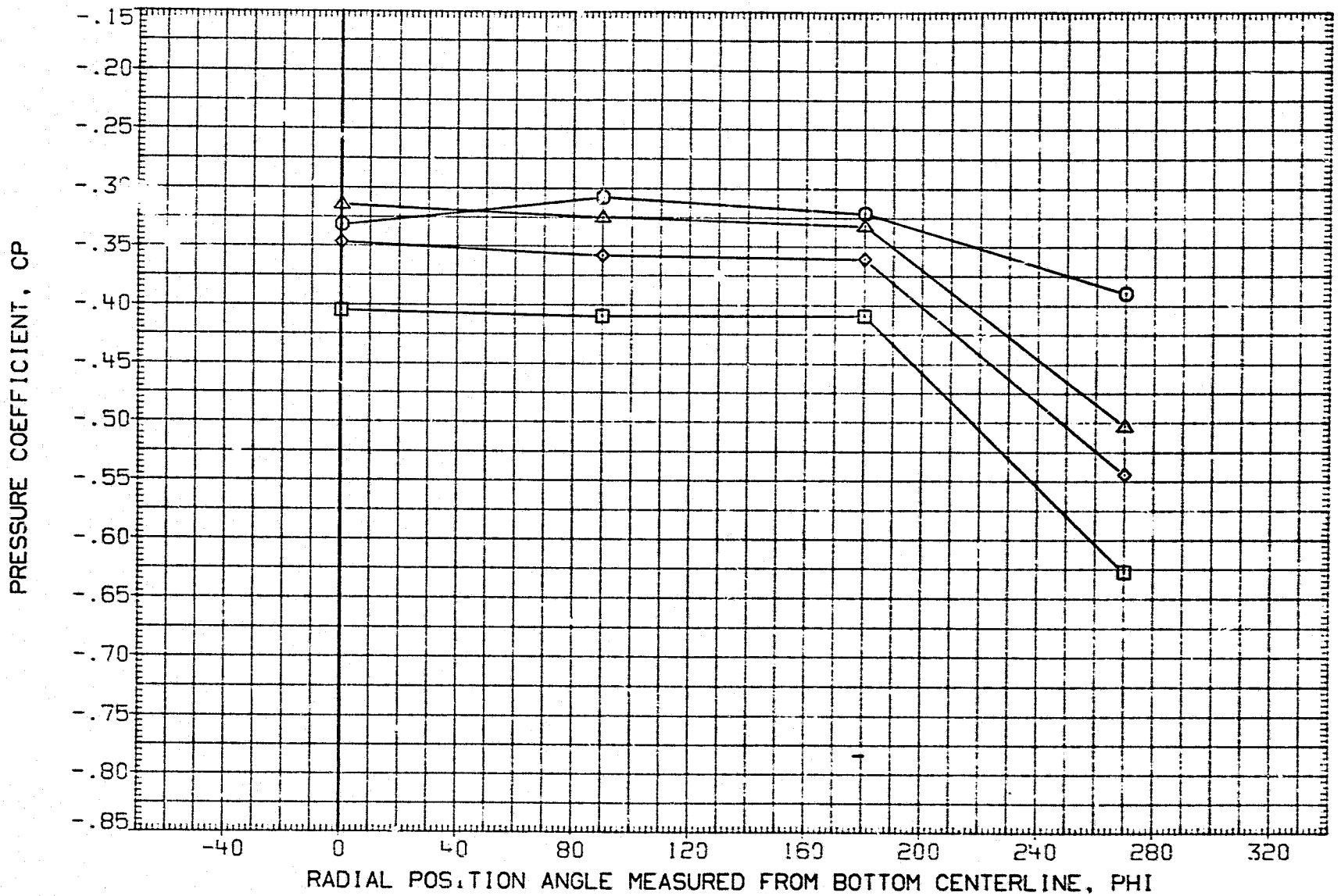


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = 4.000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4128) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (BE4120) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (BE4106) | ◇ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (BE4101) | △ | APC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |

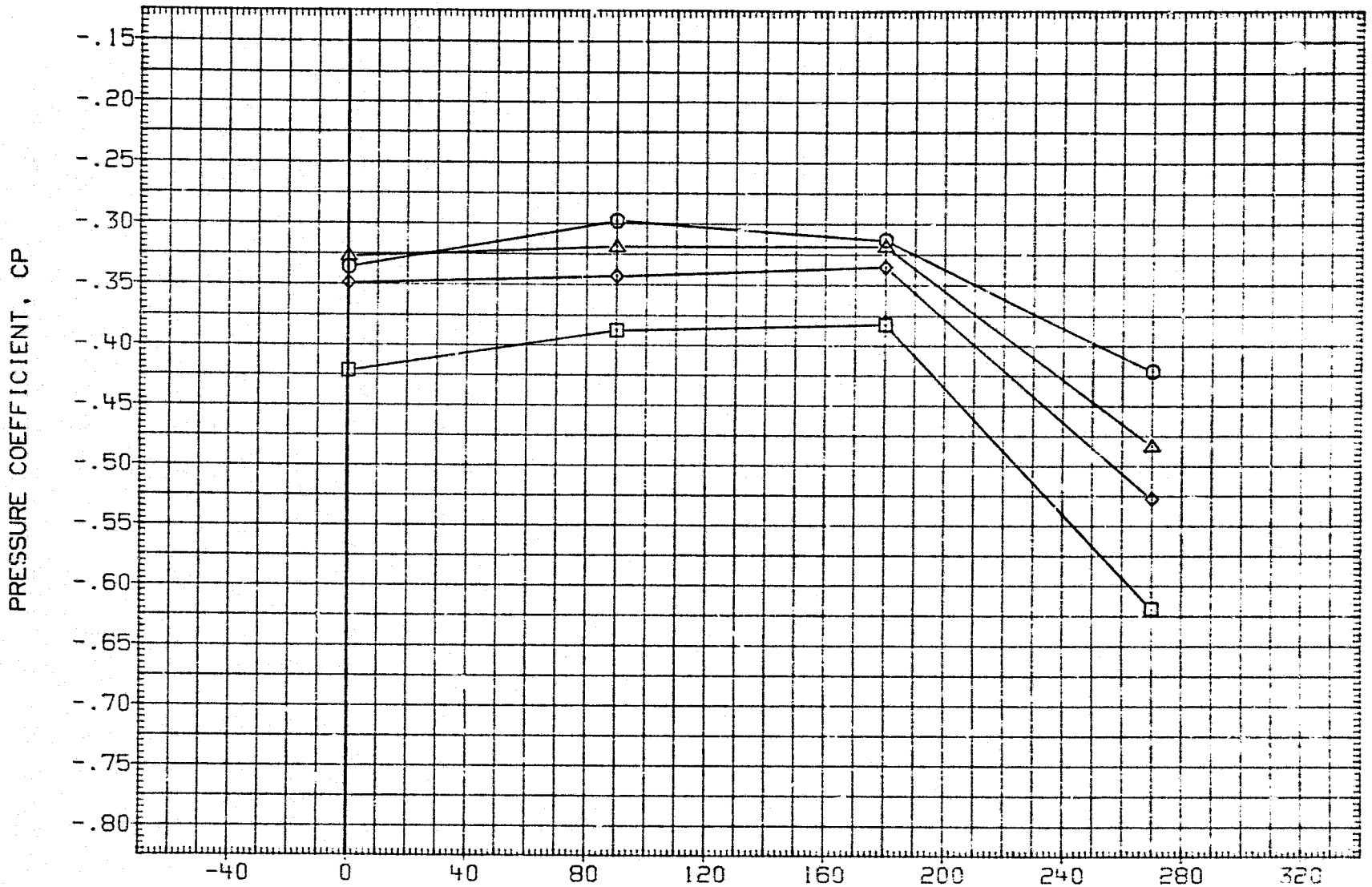


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = .000 BETA = -4.000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4128) | ○ | ARC11-023IA8D OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (BE4120) | □ | ARC11-023IA8D OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (BE4106) | ◇ | ARC11-023IA8D OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (BE4101) | △ | ARC11-023IA8D OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |

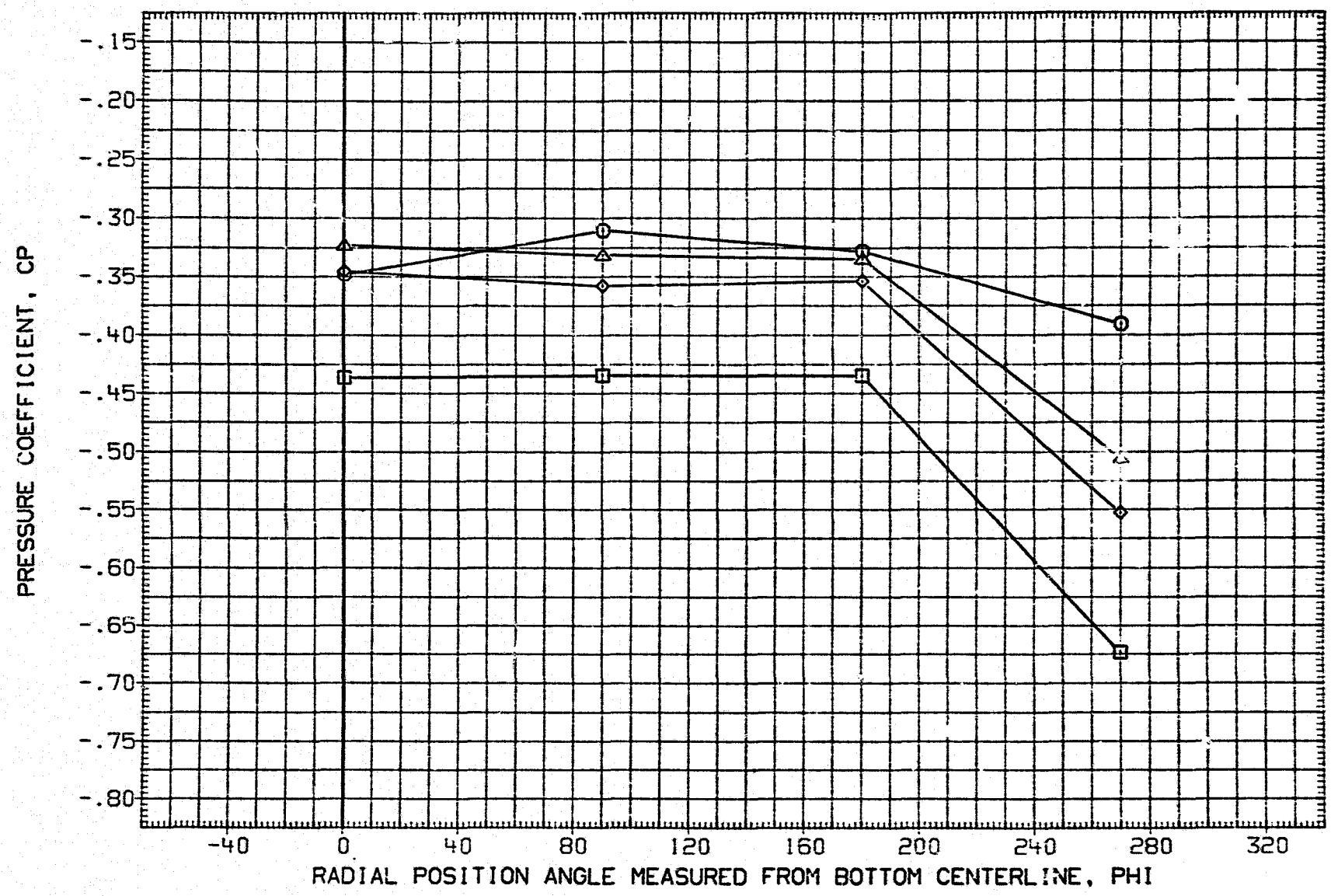


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = .000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4128) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (BE4120) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (BE4106) | ◇ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |
| (BE4101) | △ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .600 | 3.400 |

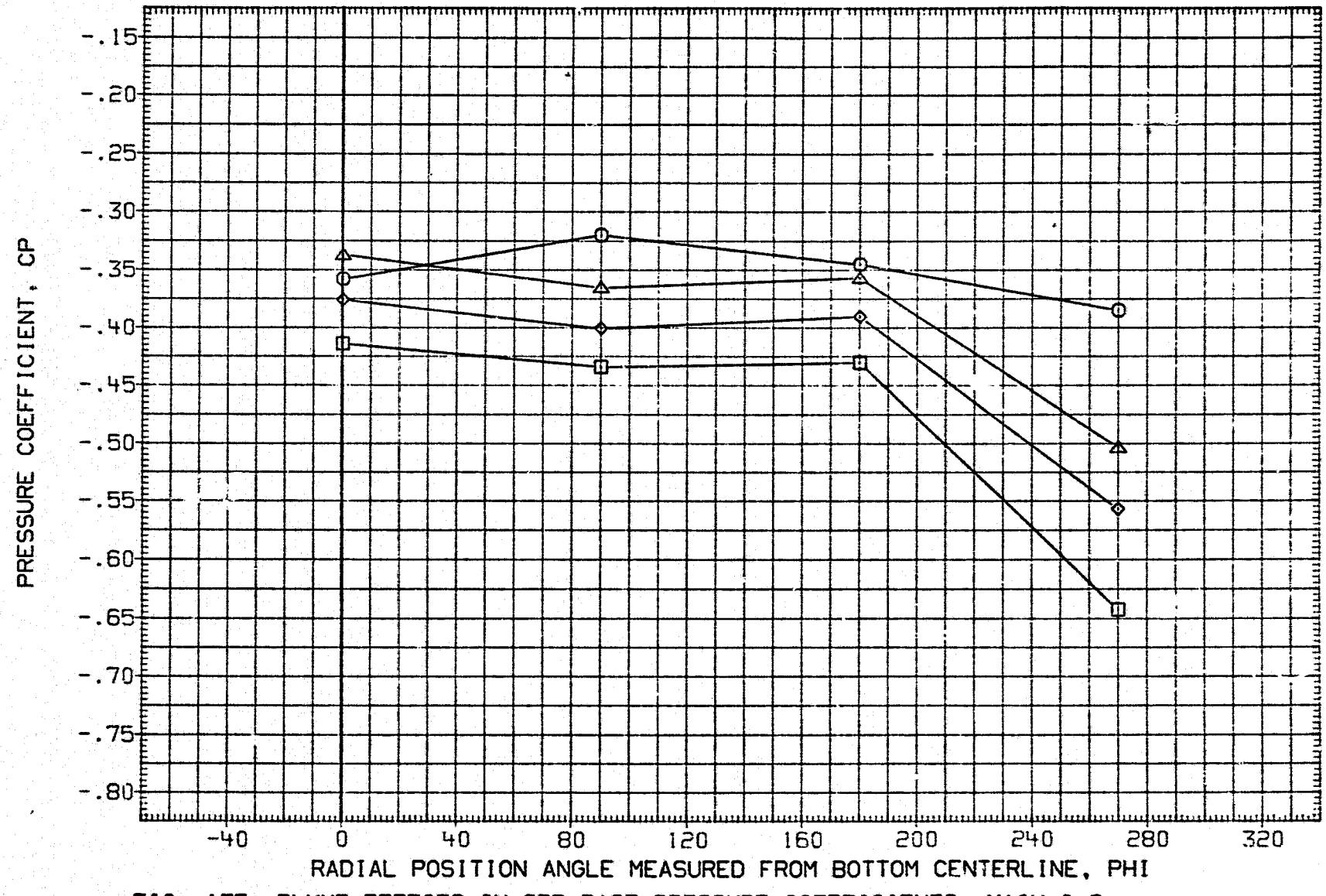


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = .000 BETA = 4.000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4129) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (AE4121) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (AE4107) | ◇ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (AE4102) | △ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |

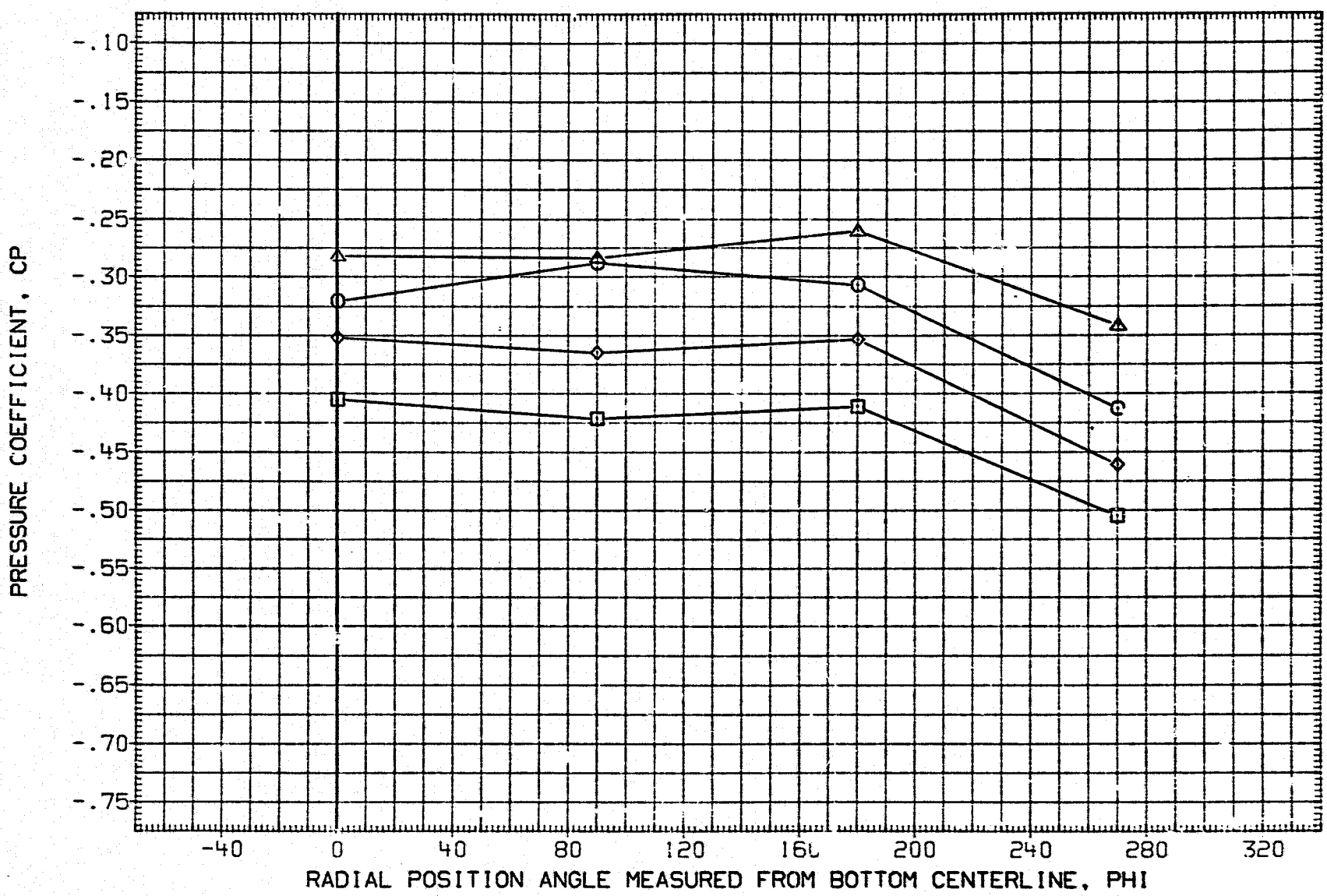


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = -4.000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4129) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (AE4121) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (AE4107) | ◇ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (AE4102) | △ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |

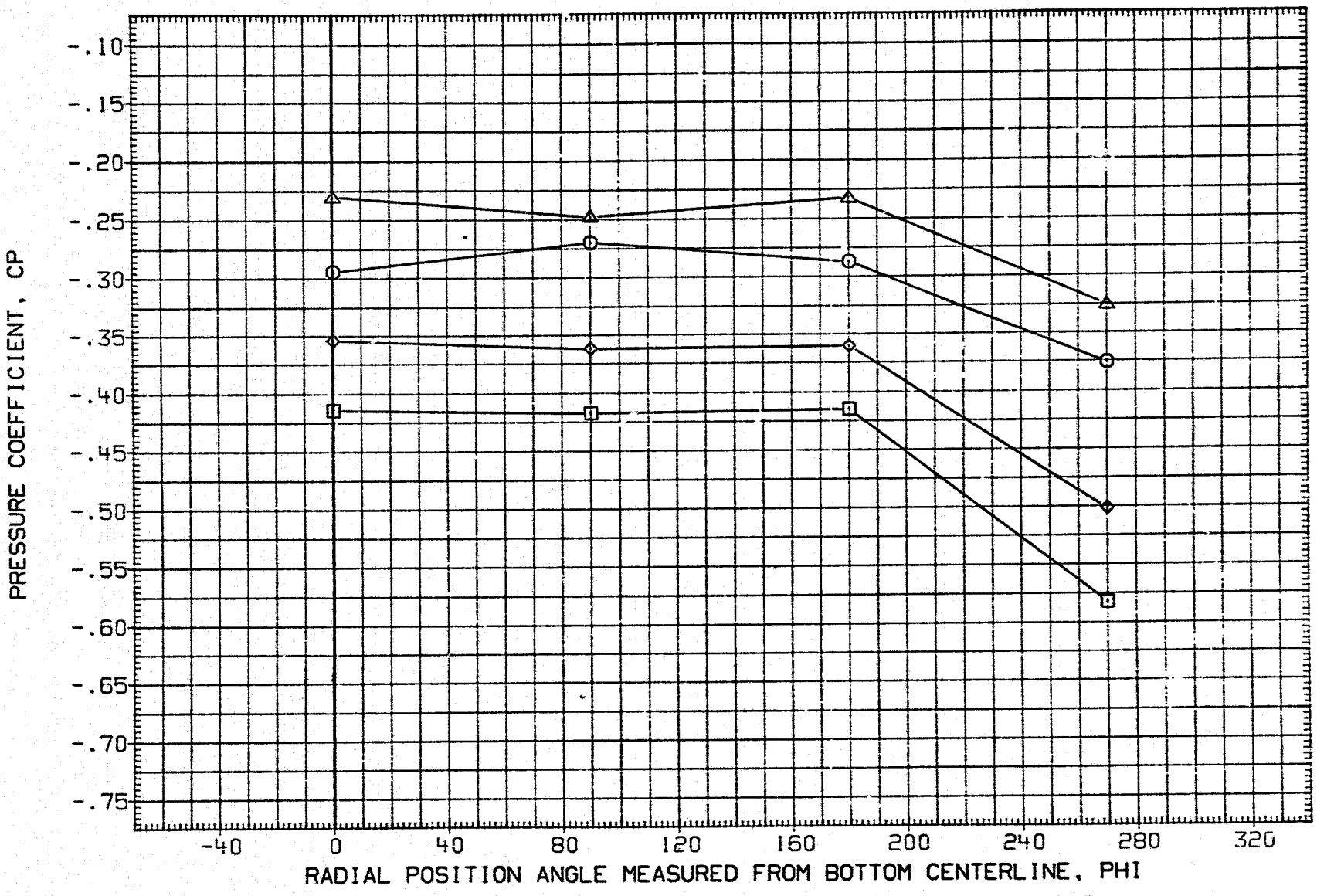


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = .000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4129) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (AE4121) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (AE4107) | ◇ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (AE4102) | △ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |

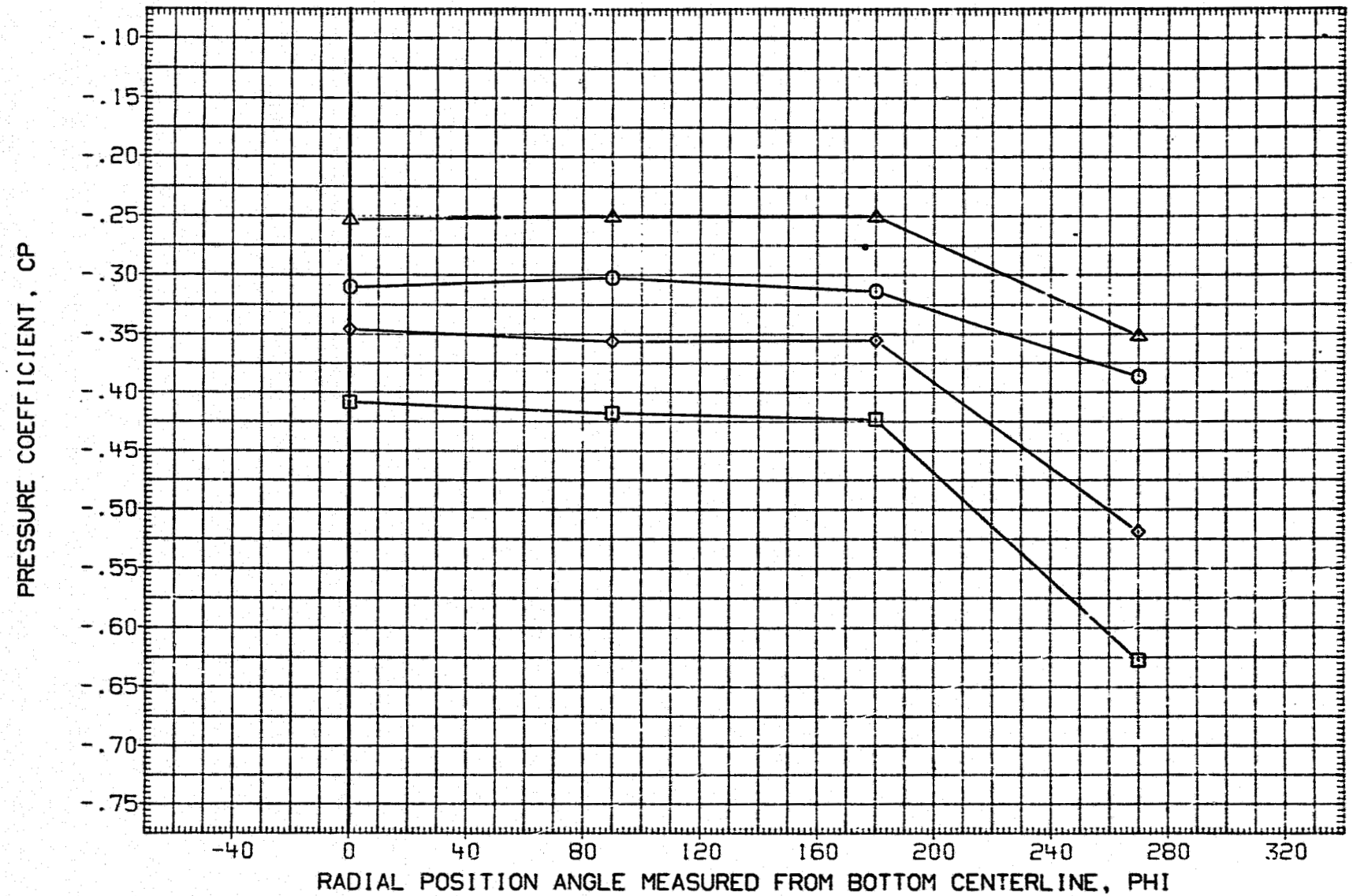


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = 4.000 BETA = .000 XB/LE = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4129) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (BE4121) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (BE4107) | ◇ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (BE4102) | △ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |

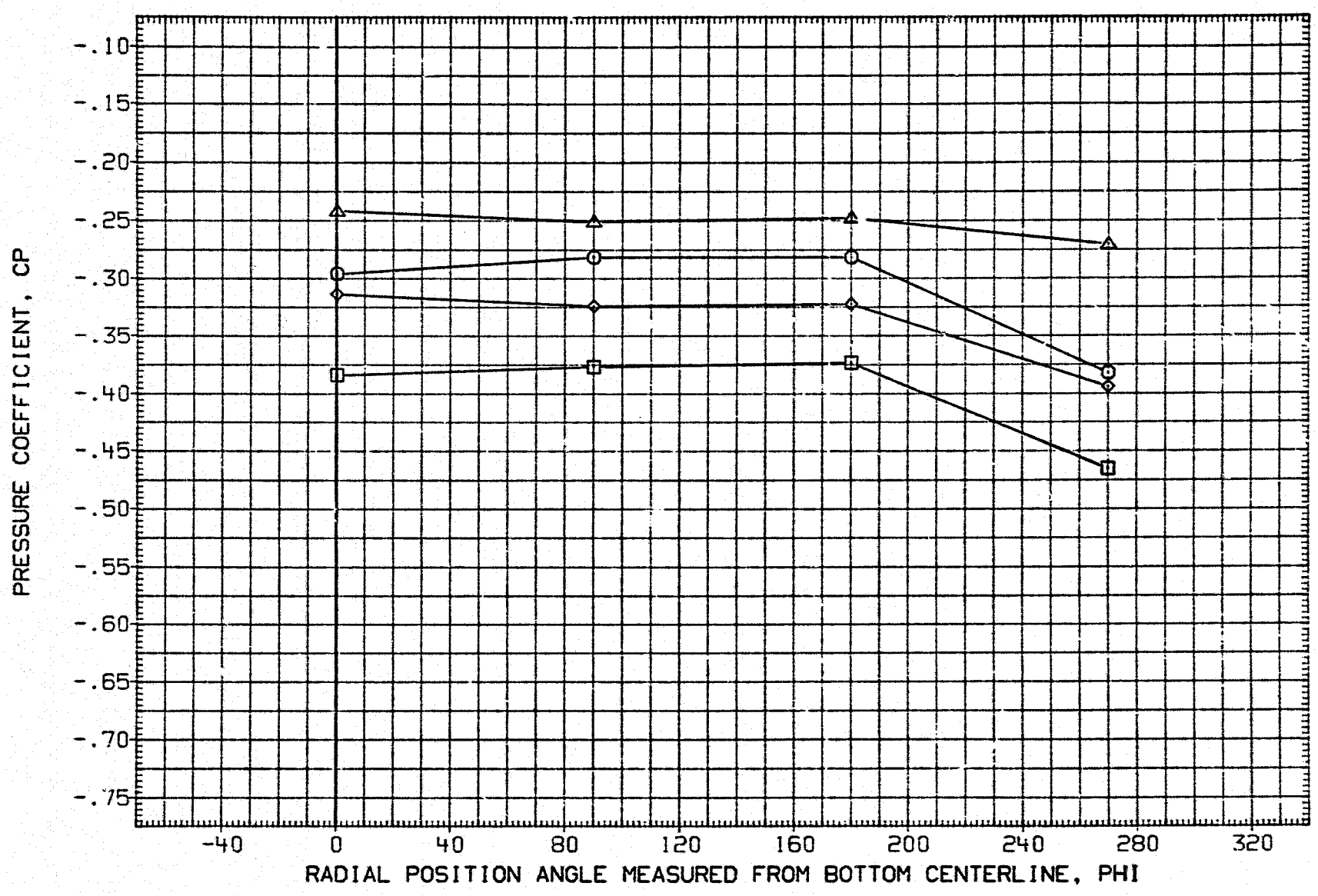


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = .000 BETA = -4.000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4129) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (BE4121) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (BE4107) | ◇ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (BE4102) | △ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |

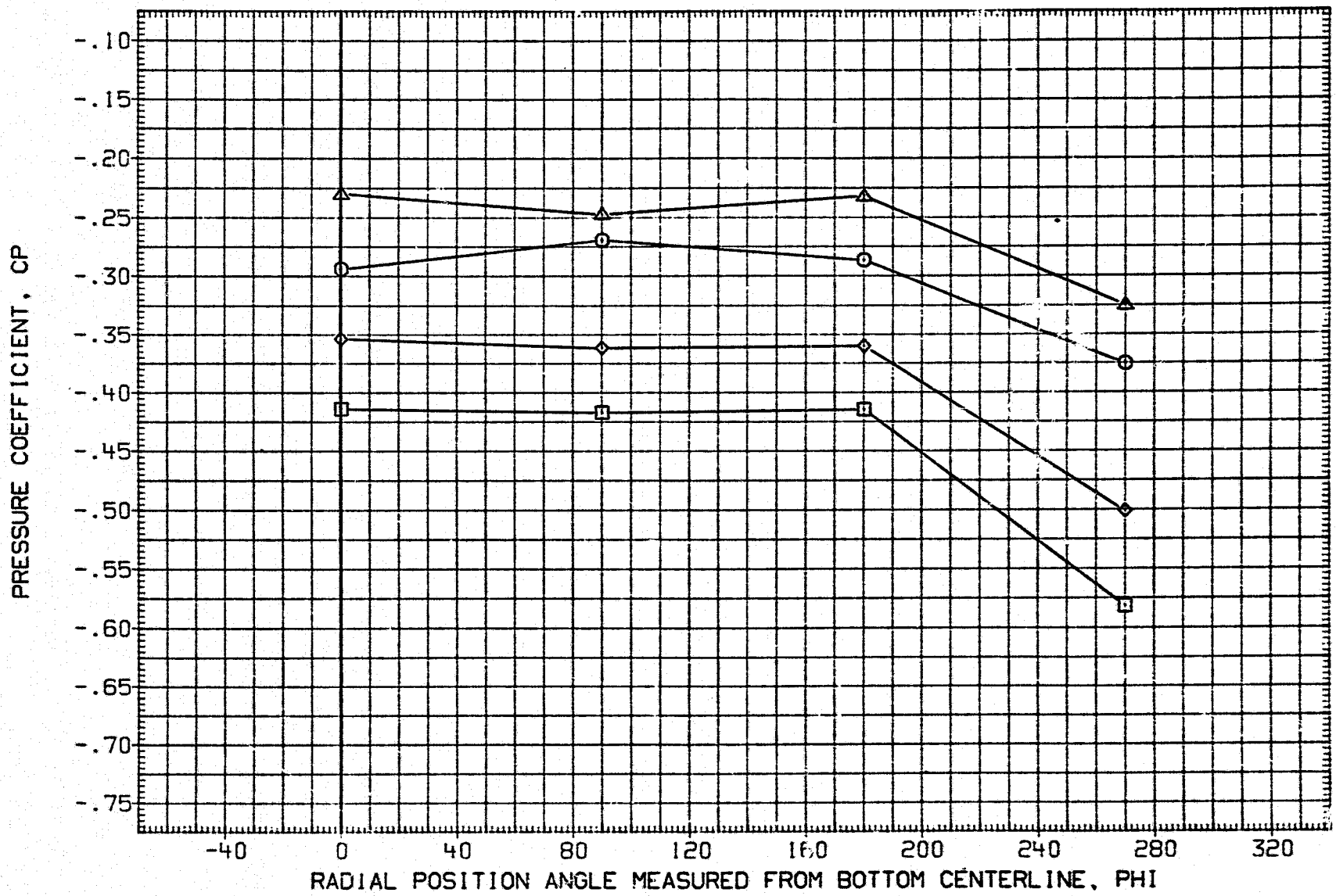


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = .000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4129) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (BE4121) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (BE4107) | ◇ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |
| (BE4102) | △ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | .900 | 4.250 |

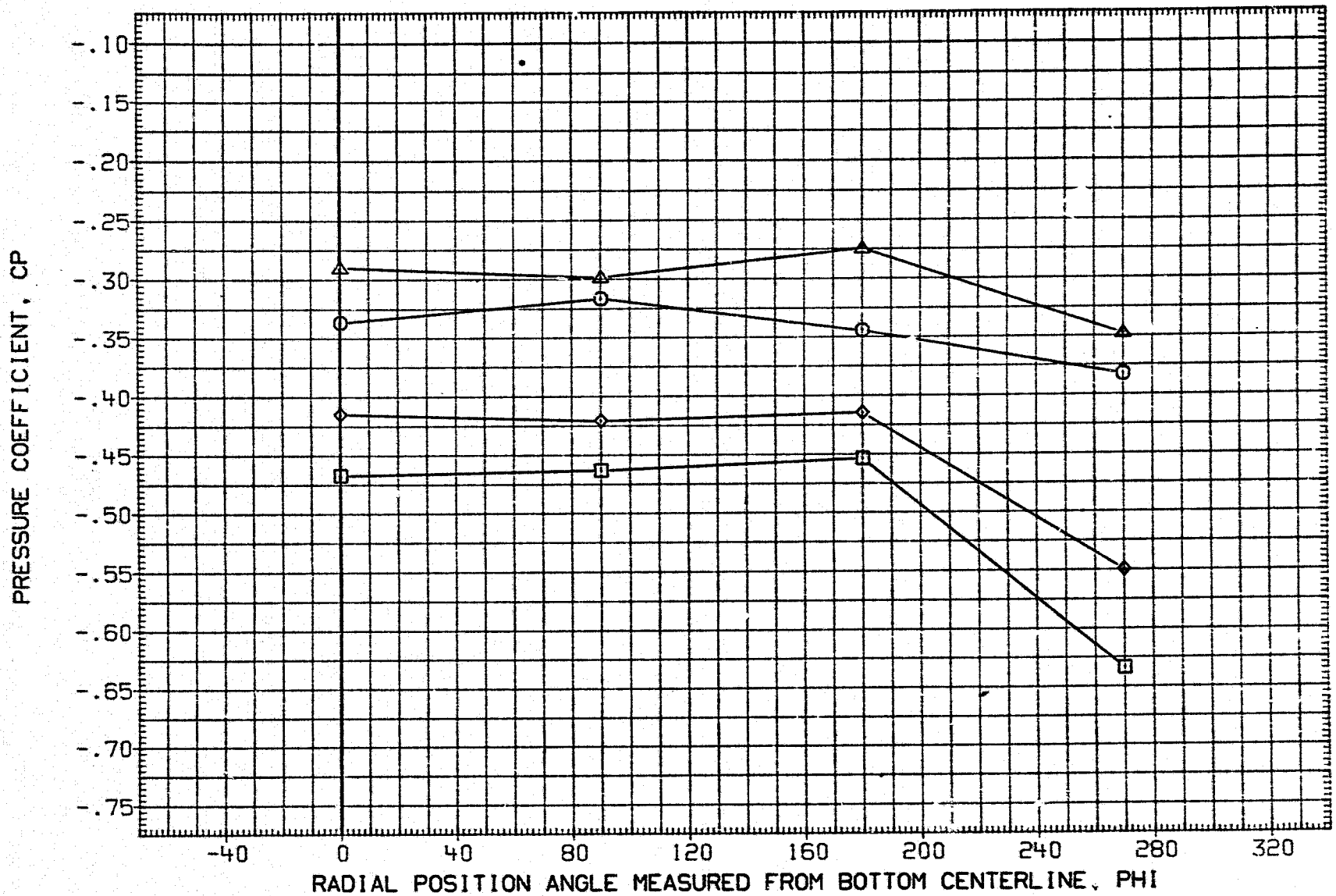


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = .000 BETA = 4.000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4130) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4122) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4125) | ◇ | ARC11-023IA80 OTS(SRB=N- ORB=" ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4108) | △ | ARC11-023IA80 OTS(SRB=N+ ORB= ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4103) | ▷ | ARC11-023IA80 OTS(SRB=N++ ORB=.. ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |

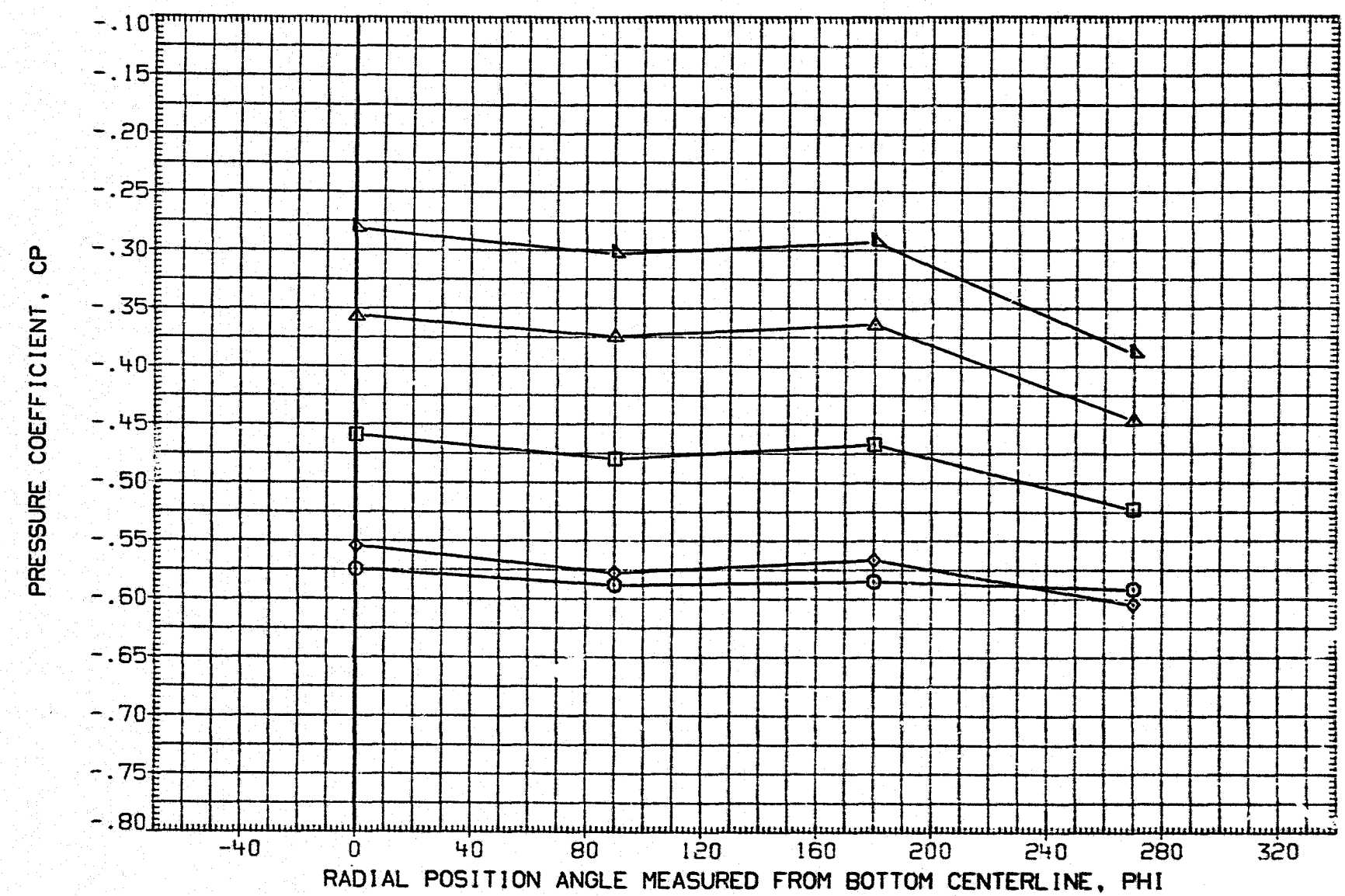


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = -4.000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4130) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4122) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4125) | ◇ | ARC11-0231A80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4108) | △ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | 000 | 1.100 | 4.250 |
| (AE4103) | ▷ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | 000 | 1.100 | 4.250 |

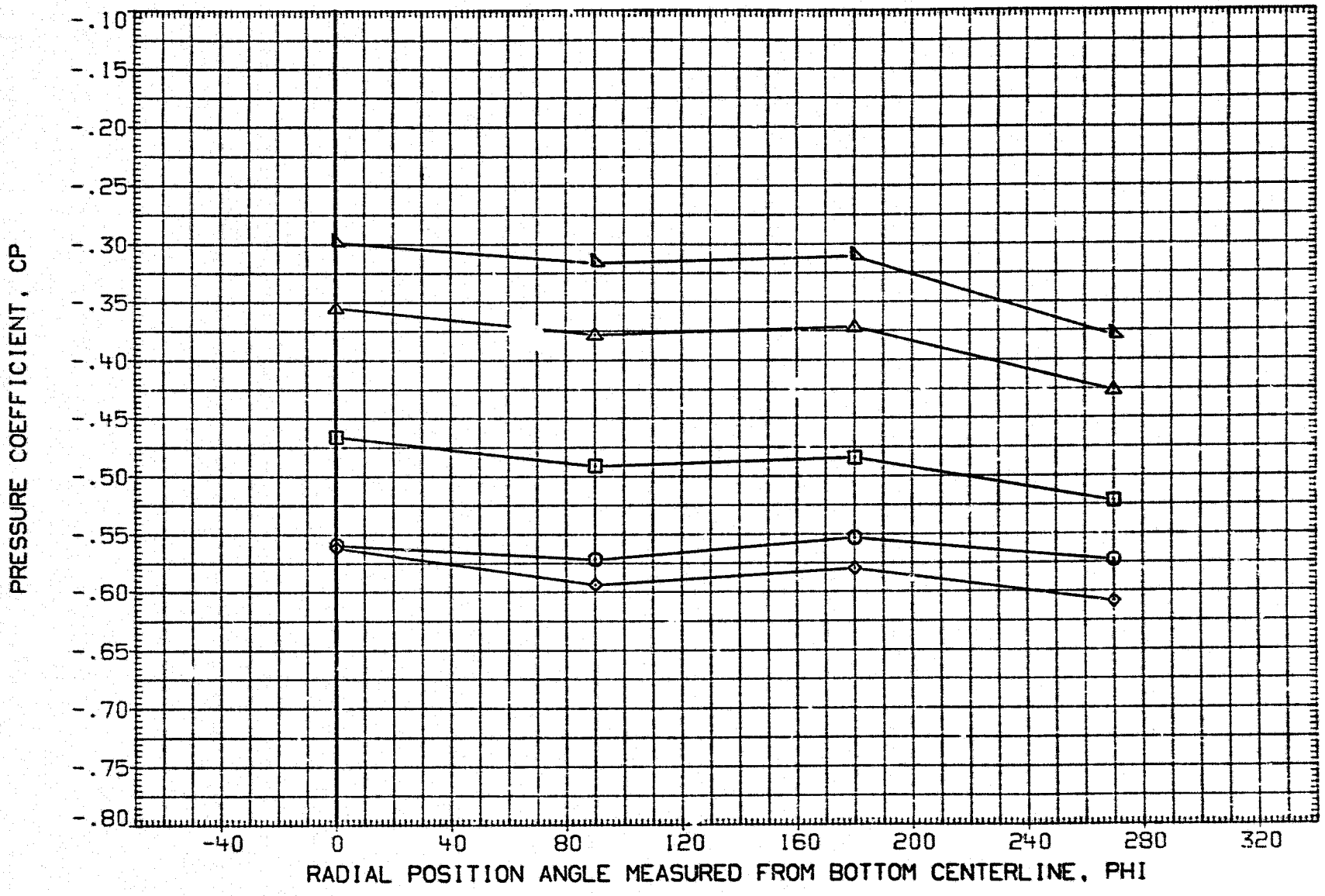


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = .000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4130) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4122) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4125) | ◇ | ARC11-0231A80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4108) | △ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (AE4103) | ▷ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |

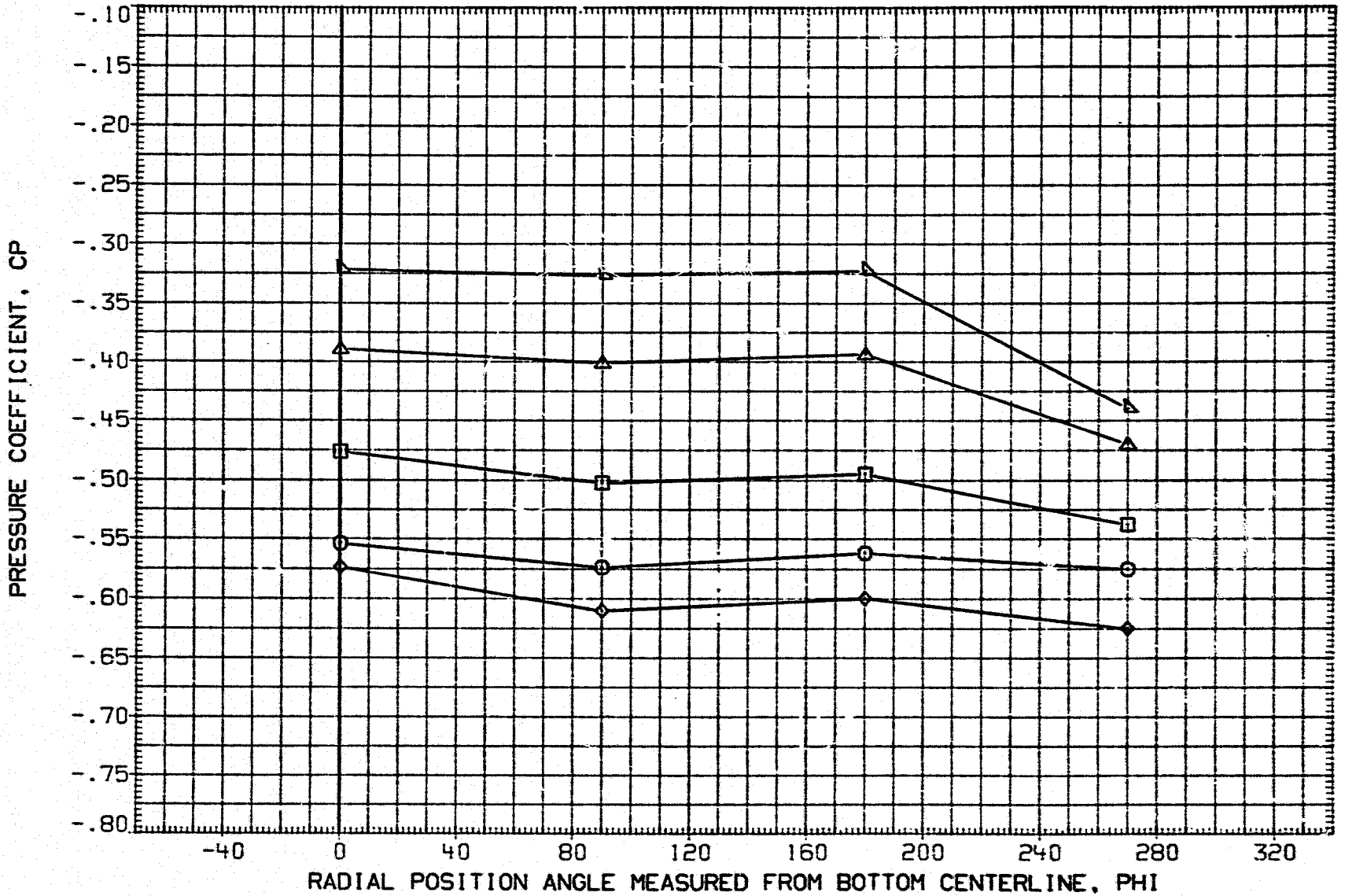


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = 4.000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4130) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4122) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4125) | ◇ | ARC11-023IA80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4108) | △ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4103) | ◺ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |

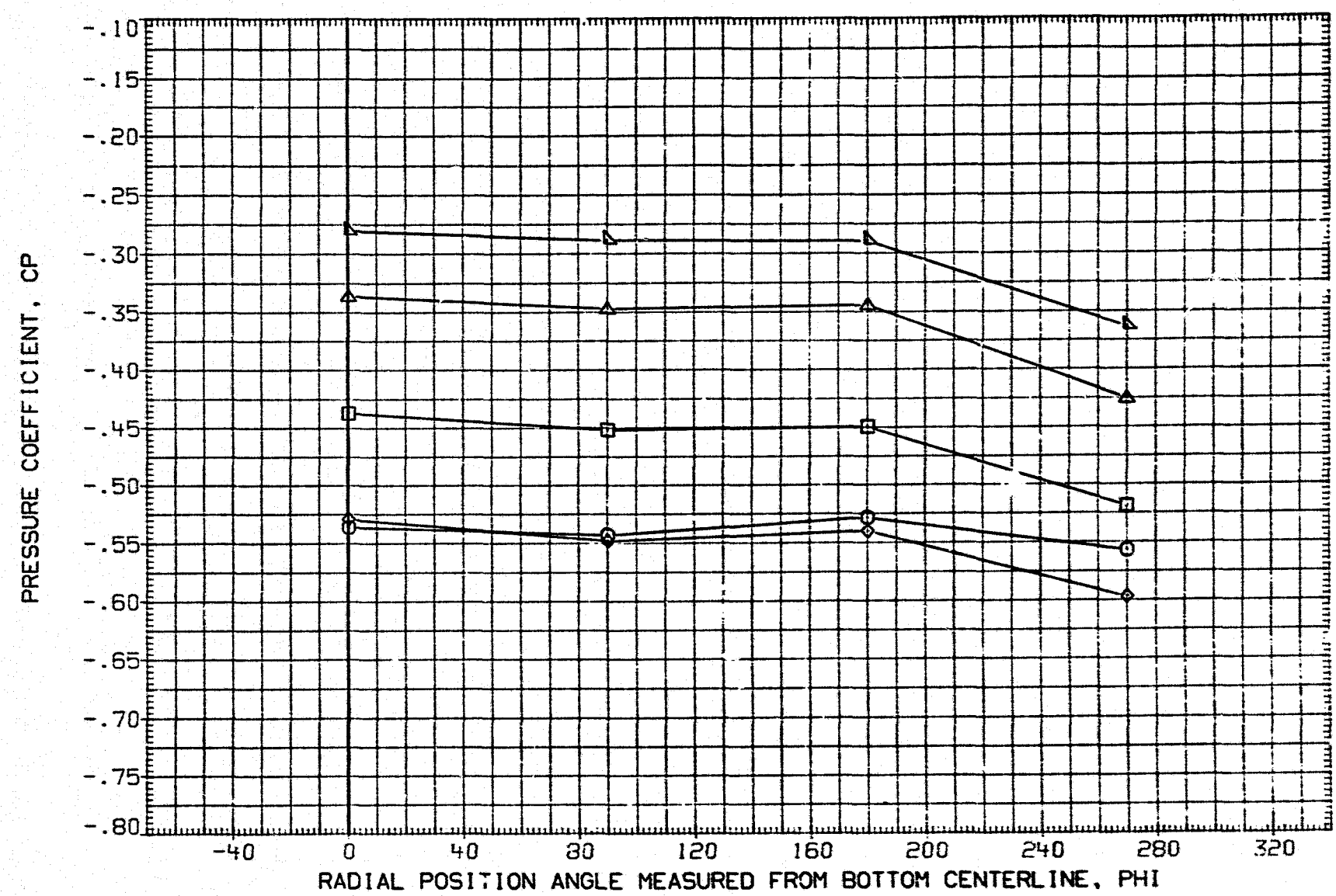


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = .000 BETA = -4.000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4130) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4122) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4125) | ◇ | ARC11-0231A80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4108) | △ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4103) | ◁ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |

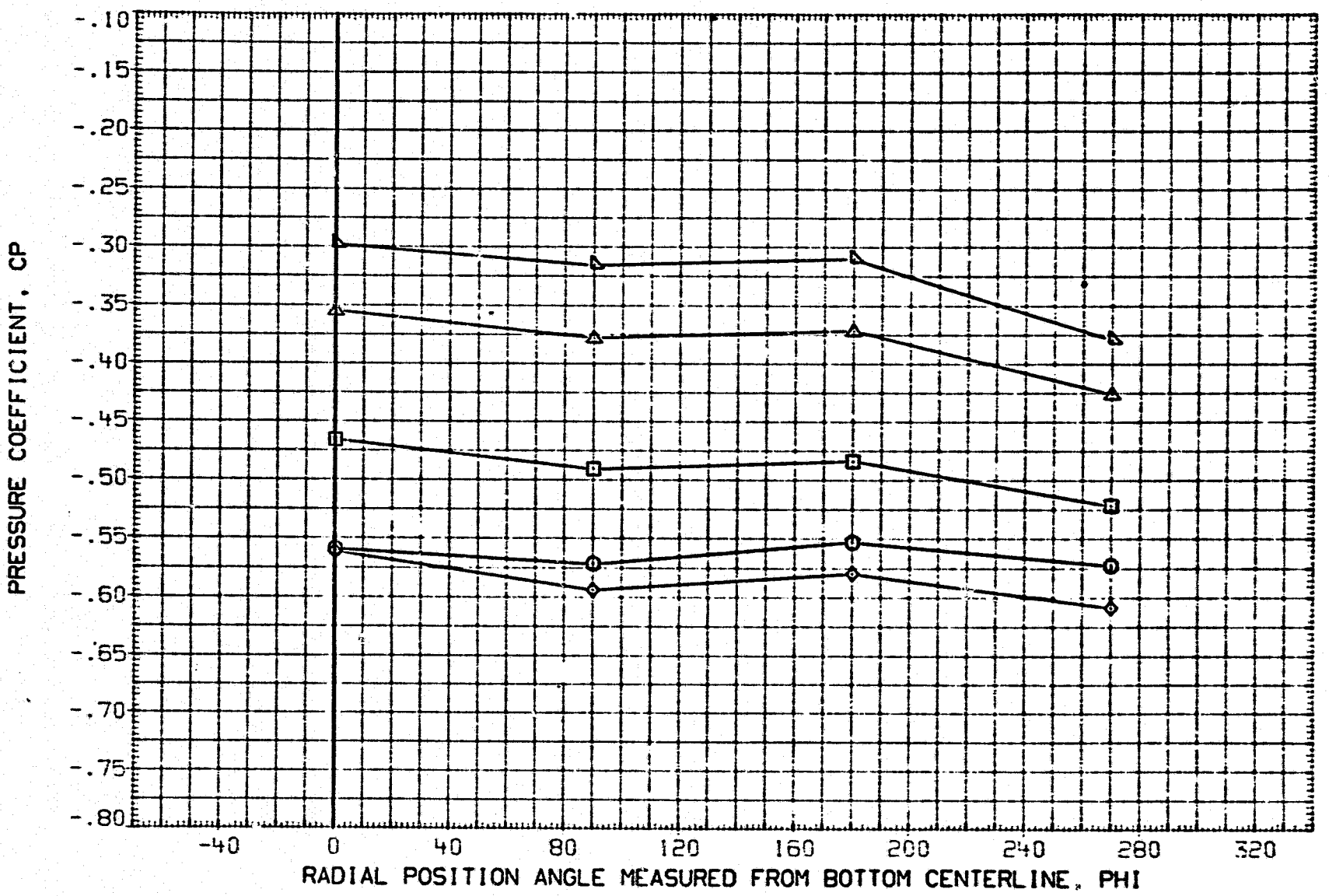


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = .000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4130) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4122) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4125) | ◇ | ARC11-023IA80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4108) | △ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |
| (BE4103) | ▷ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.100 | 4.250 |

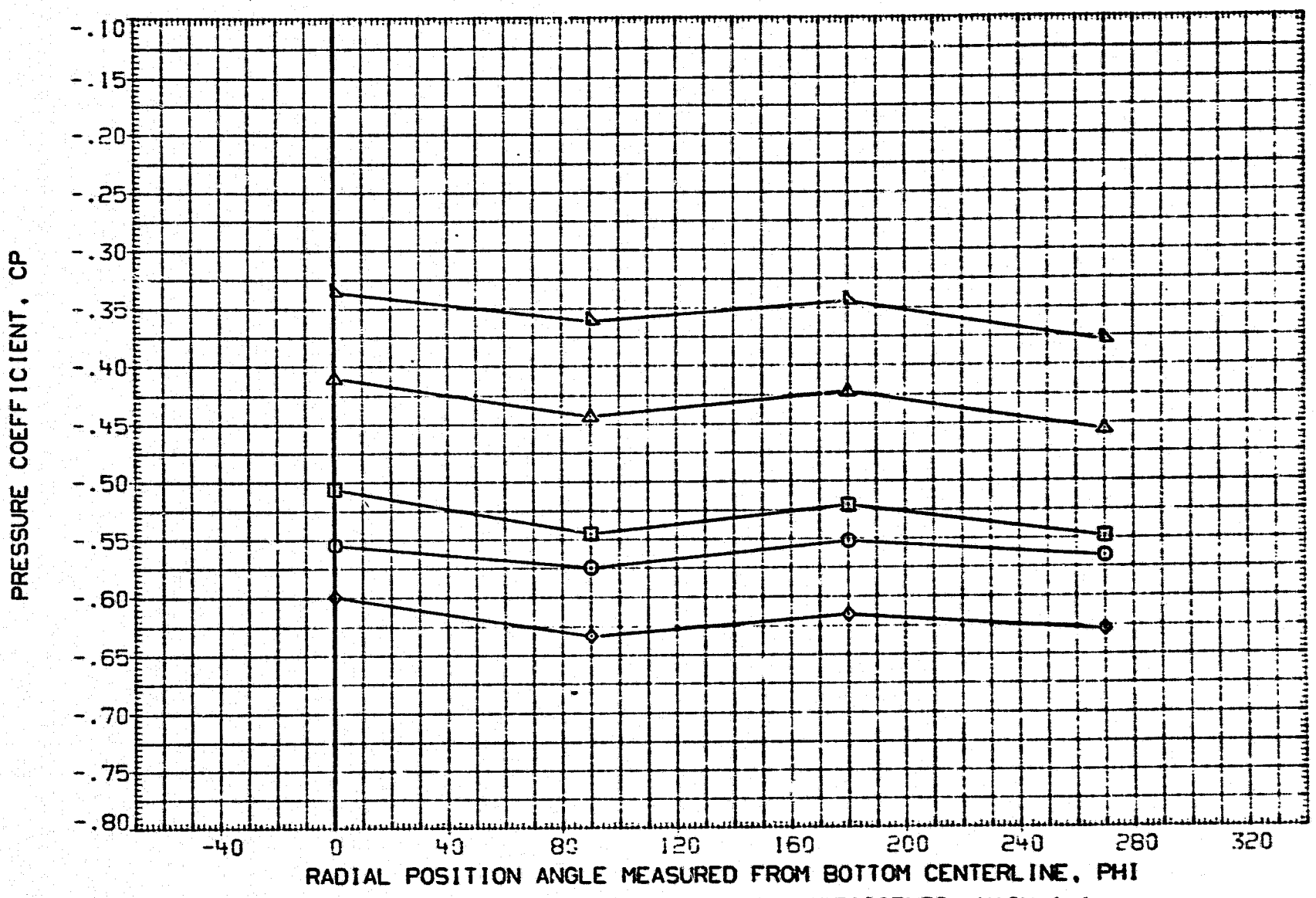


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = .000 BETA = 4.000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4131) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4123) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4126) | ◇ | ARC11-0231A80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4109) | △ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4104) | ◁ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |

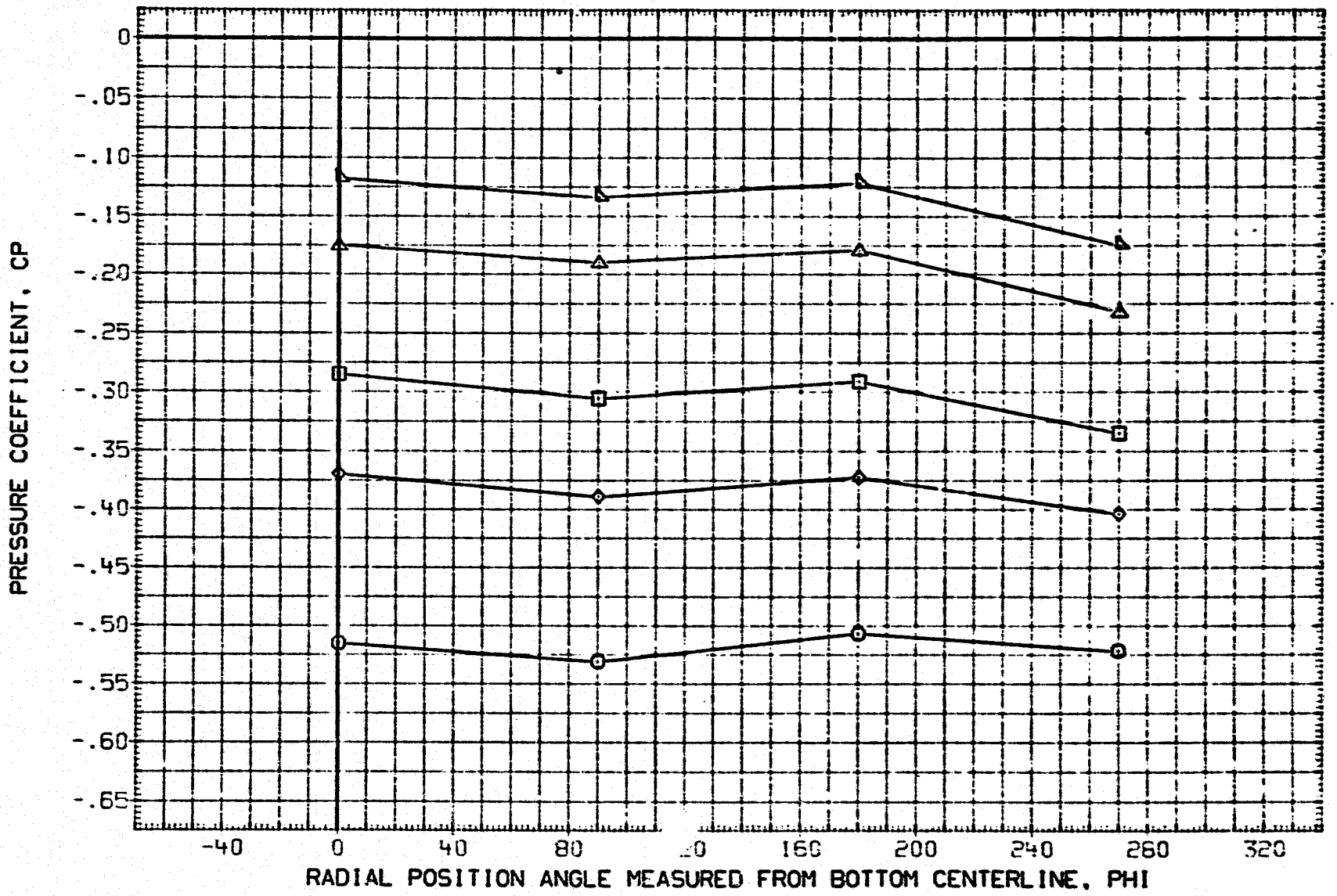


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = -4.000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4131) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4123) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4126) | ◇ | ARC11-0231A80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4109) | △ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4104) | ▷ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |

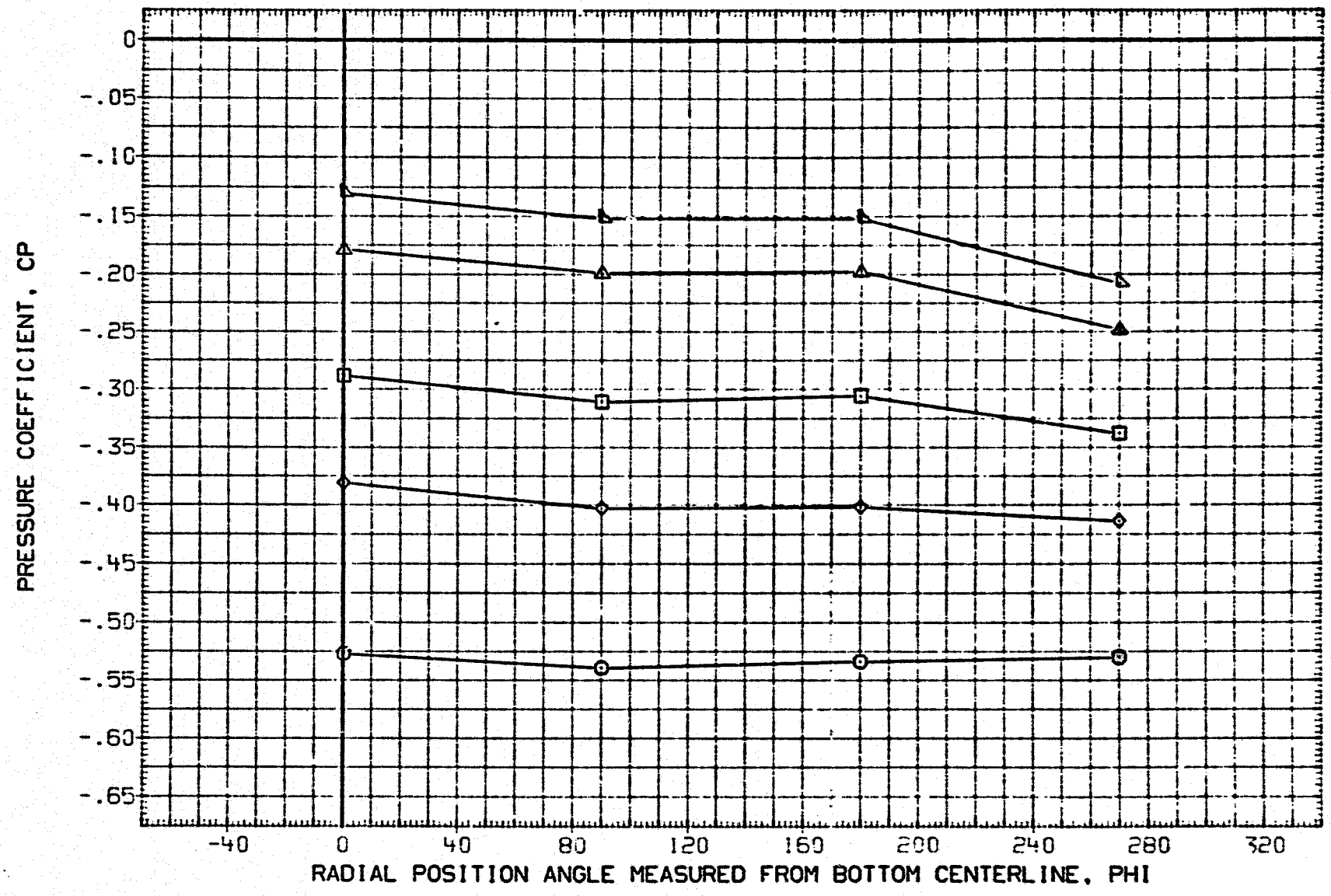


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = .000 BETA = ".000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4131) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4123) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4126) | ◇ | ARC11-0231A80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4109) | △ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (AE4104) | ▷ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |

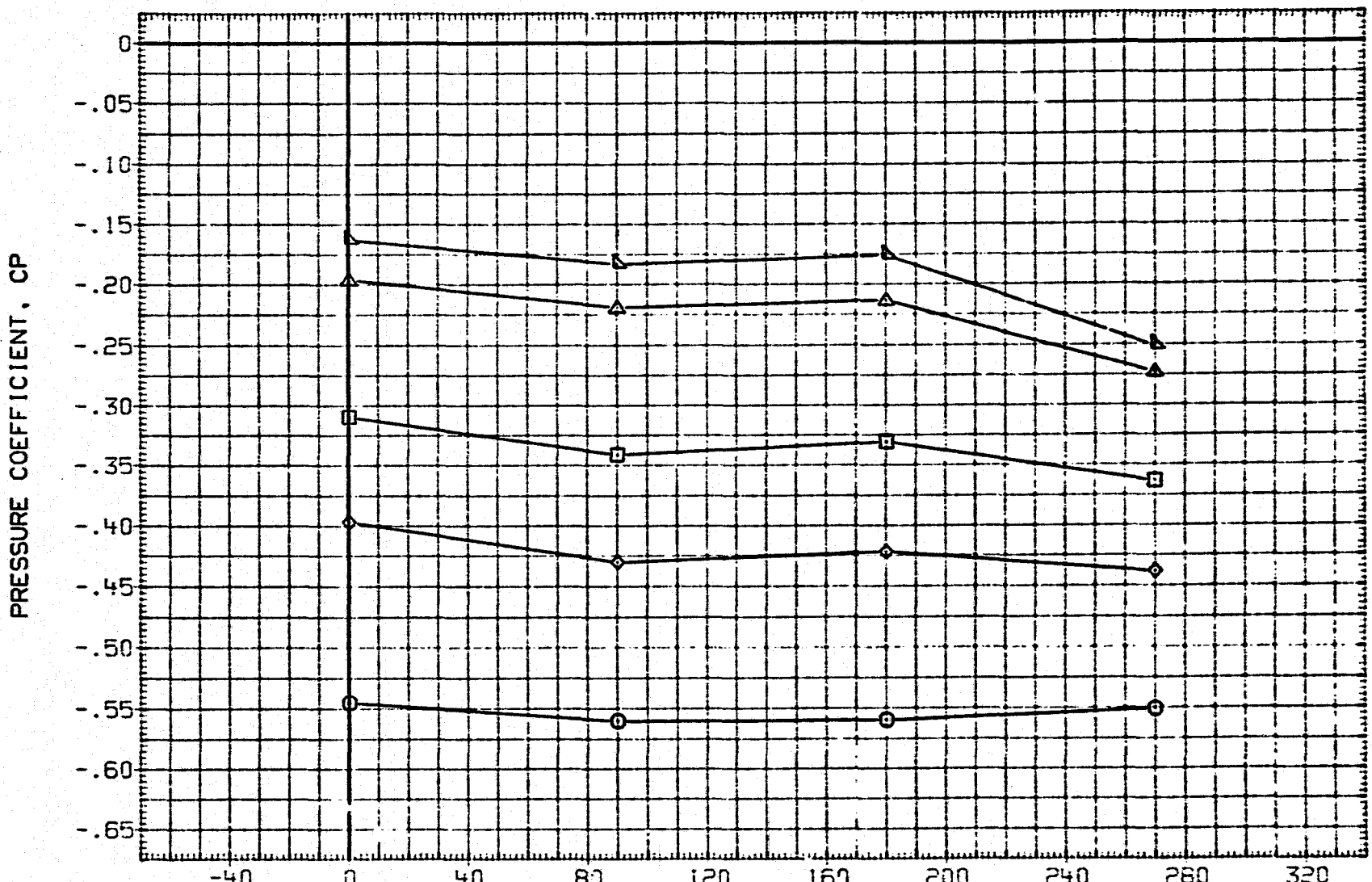


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = 4.000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4131) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4123) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4126) | ◇ | ARC11-0231A80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4109) | △ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4104) | ▷ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |

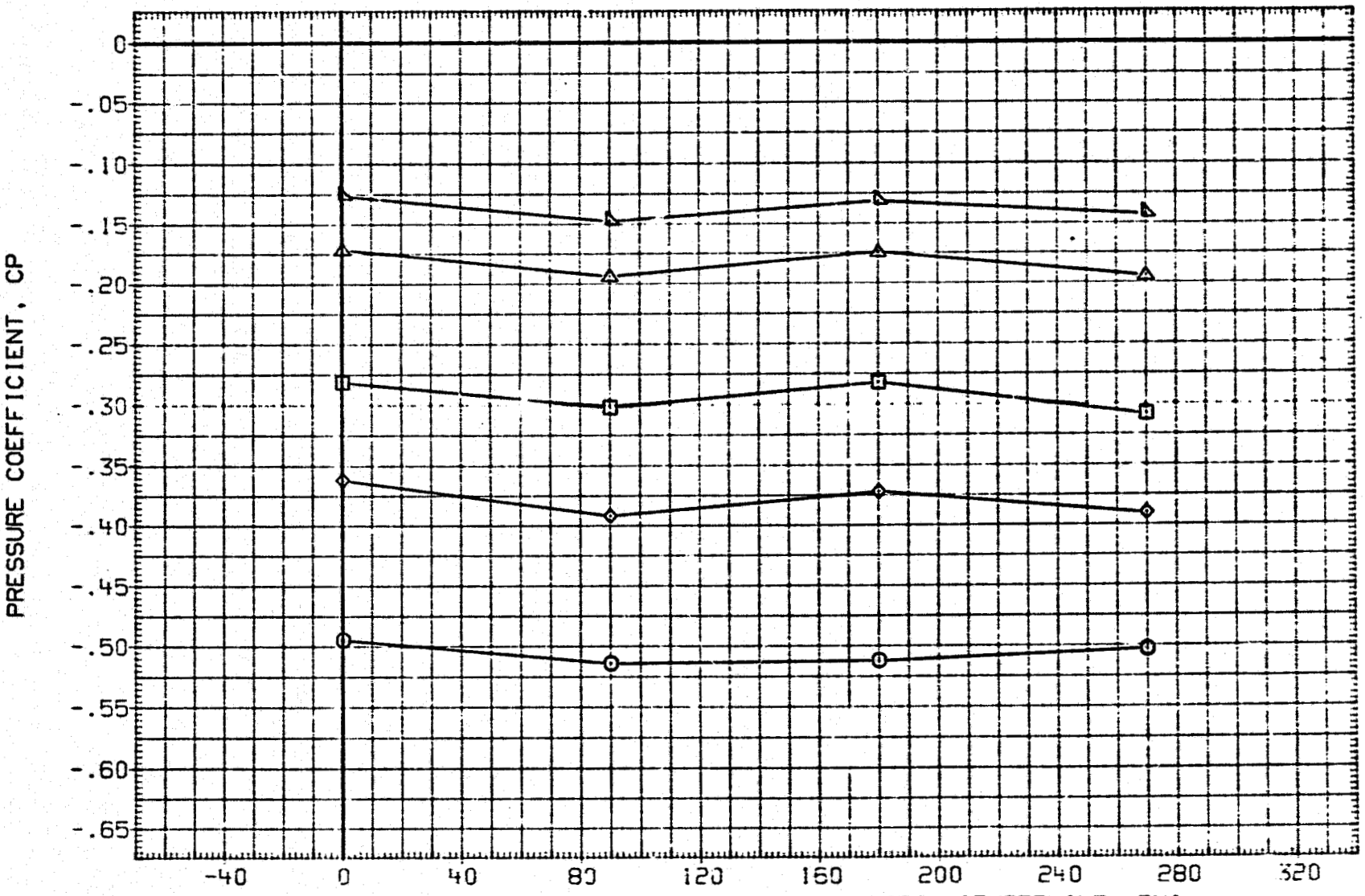


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = .000 BETA = -4.000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4131) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4123) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4126) | ◇ | ARC11-0231A80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4109) | △ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4104) | ▽ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |

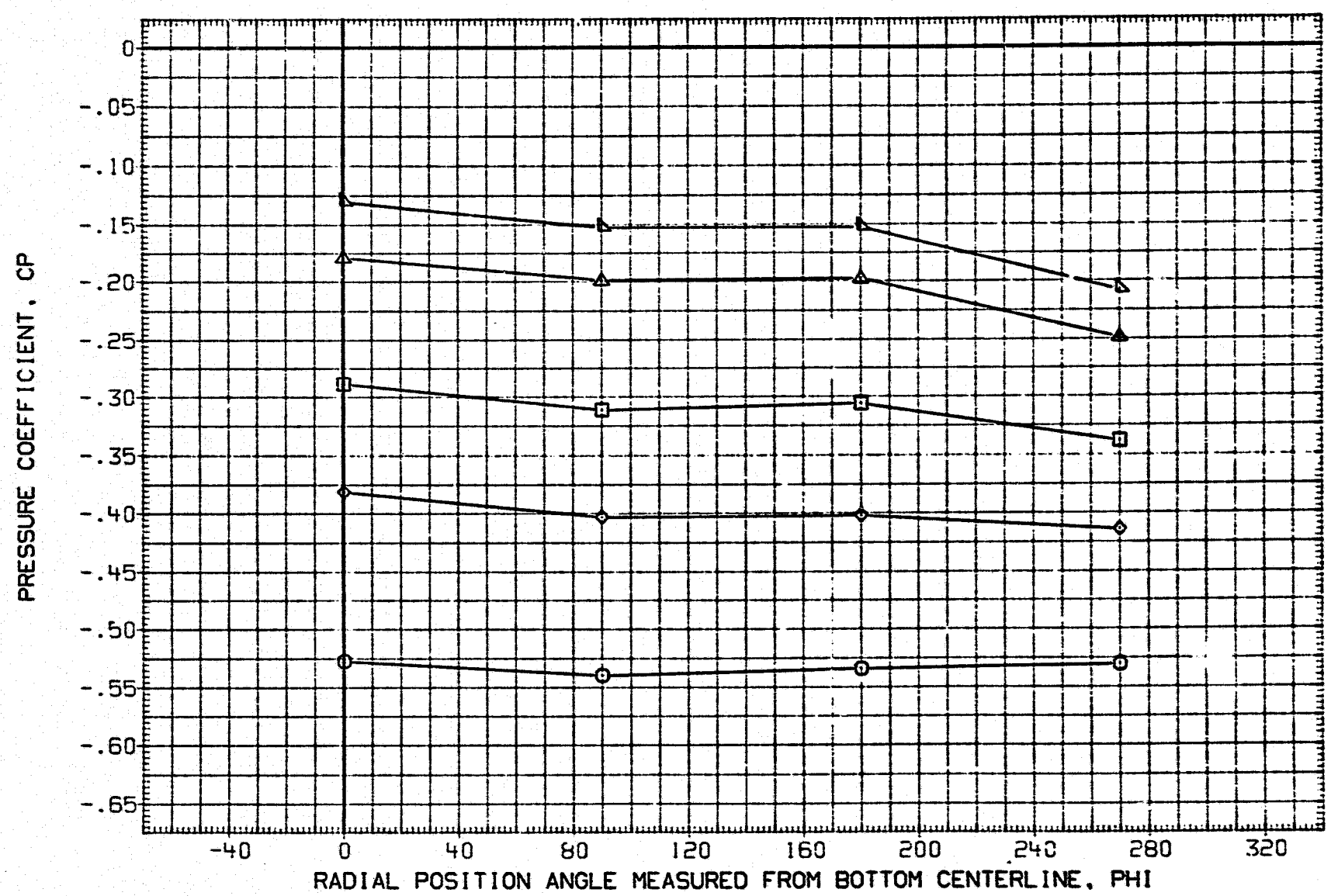


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = .000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4131) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4123) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4126) | ◇ | ARC11-023IA80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4109) | △ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |
| (BE4104) | ▷ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.250 | 4.250 |

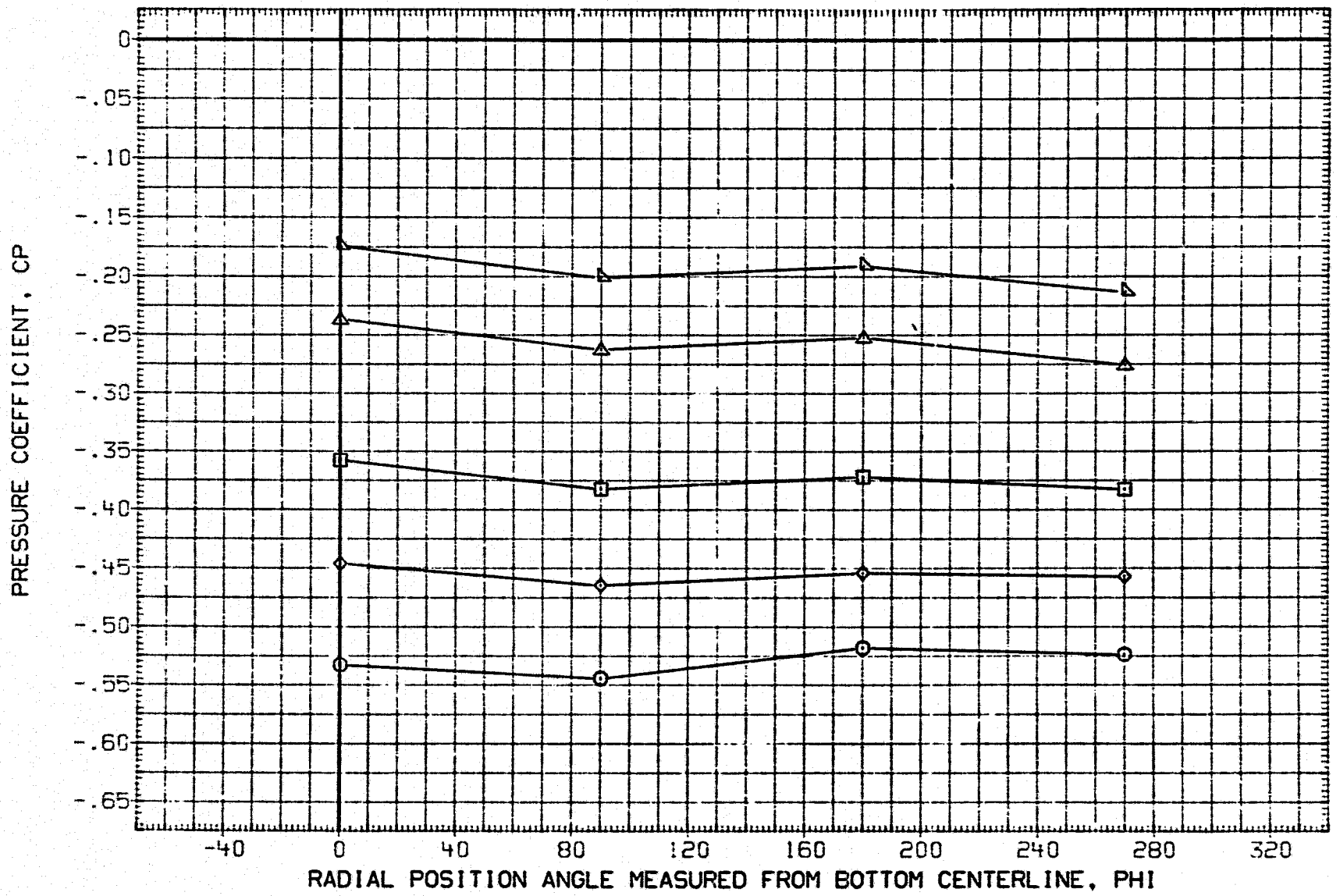


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = .000 BETA = 4.000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4132) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4124) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4127) | ◇ | ARC11-0231A80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4110) | △ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4105) | ▷ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |

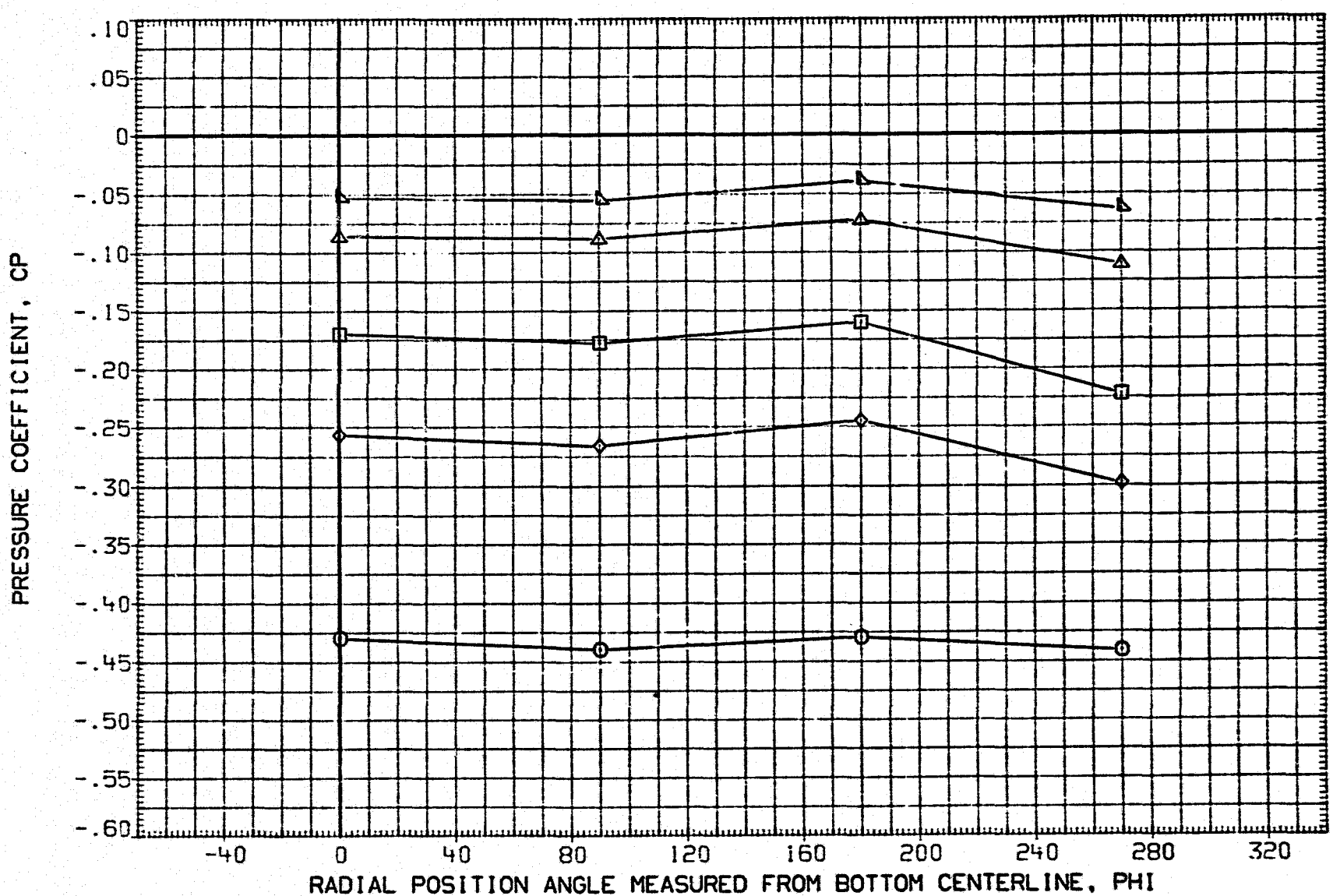


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

ALPHA = -4.000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4132) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4124) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4127) | ◇ | ARC11-023IA80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4110) | △ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4105) | ▷ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |

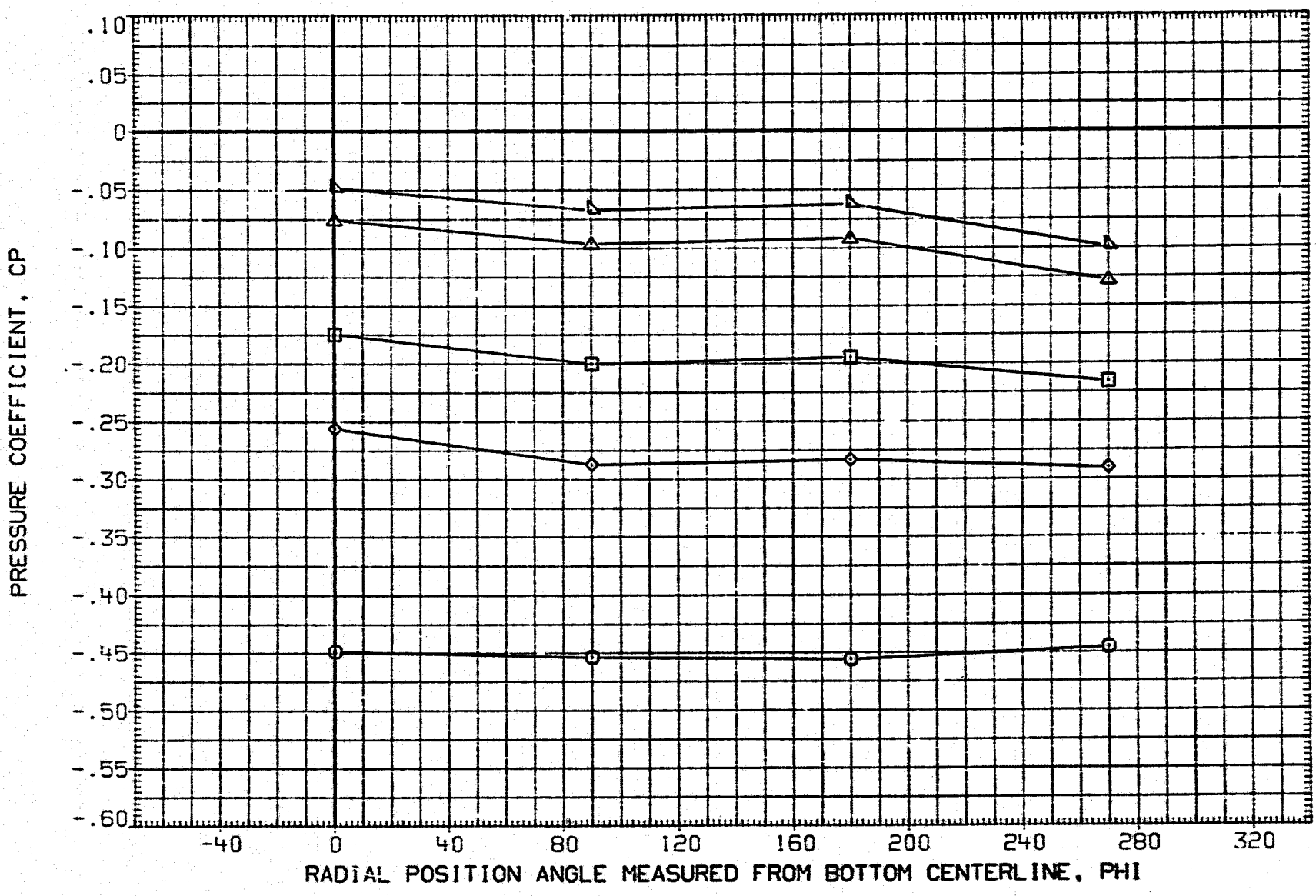


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

ALPHA = .000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (AE4132) | ○ | ARC11-0231A80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4124) | □ | ARC11-0231A80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4127) | ◇ | ARC11-0231A80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4110) | △ | ARC11-0231A80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (AE4105) | ◺ | ARC11-0231A80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |

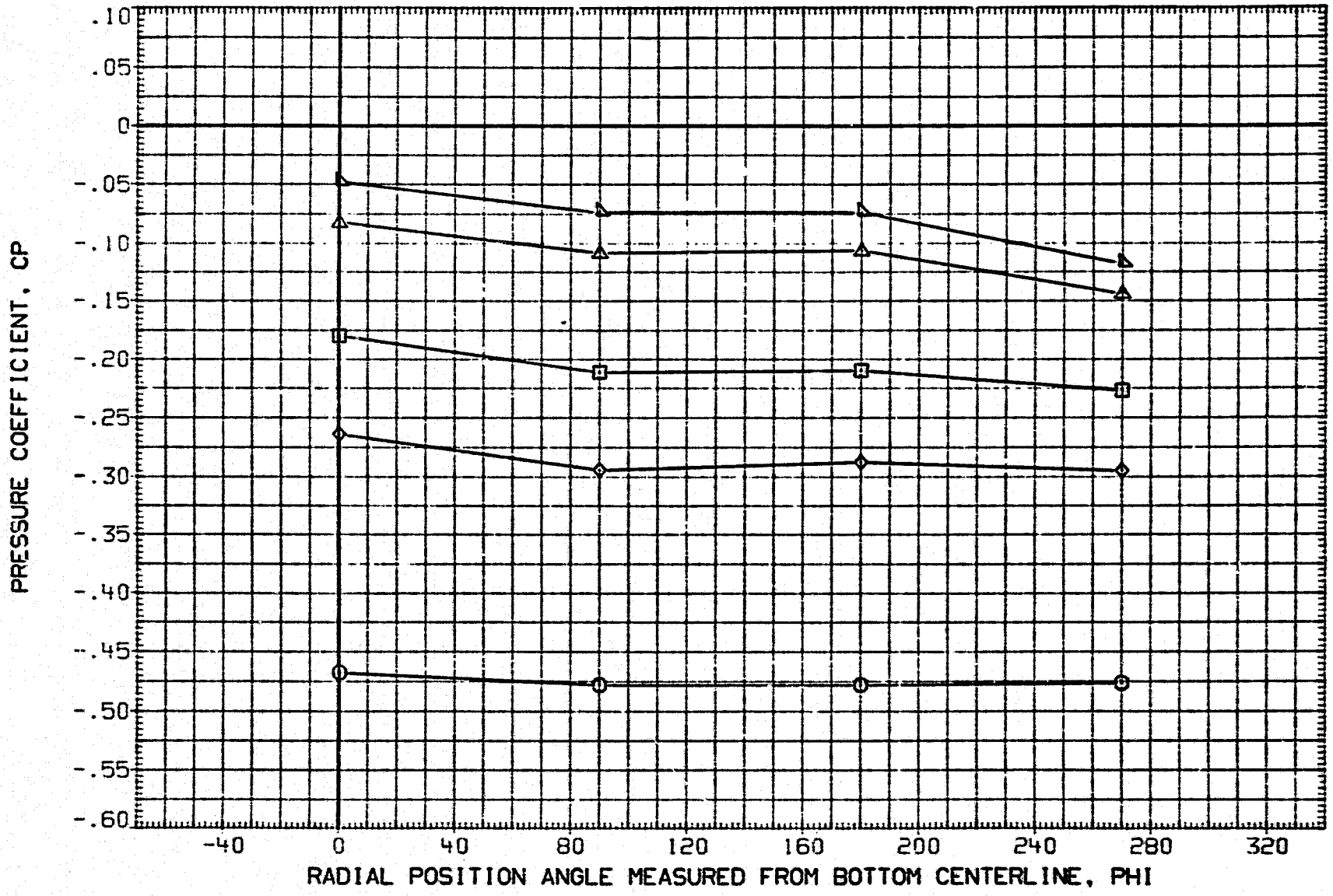


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

ALPHA = 4.000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4132) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4124) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4127) | ◇ | ARC11-023IA80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4110) | △ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4105) | ▷ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |

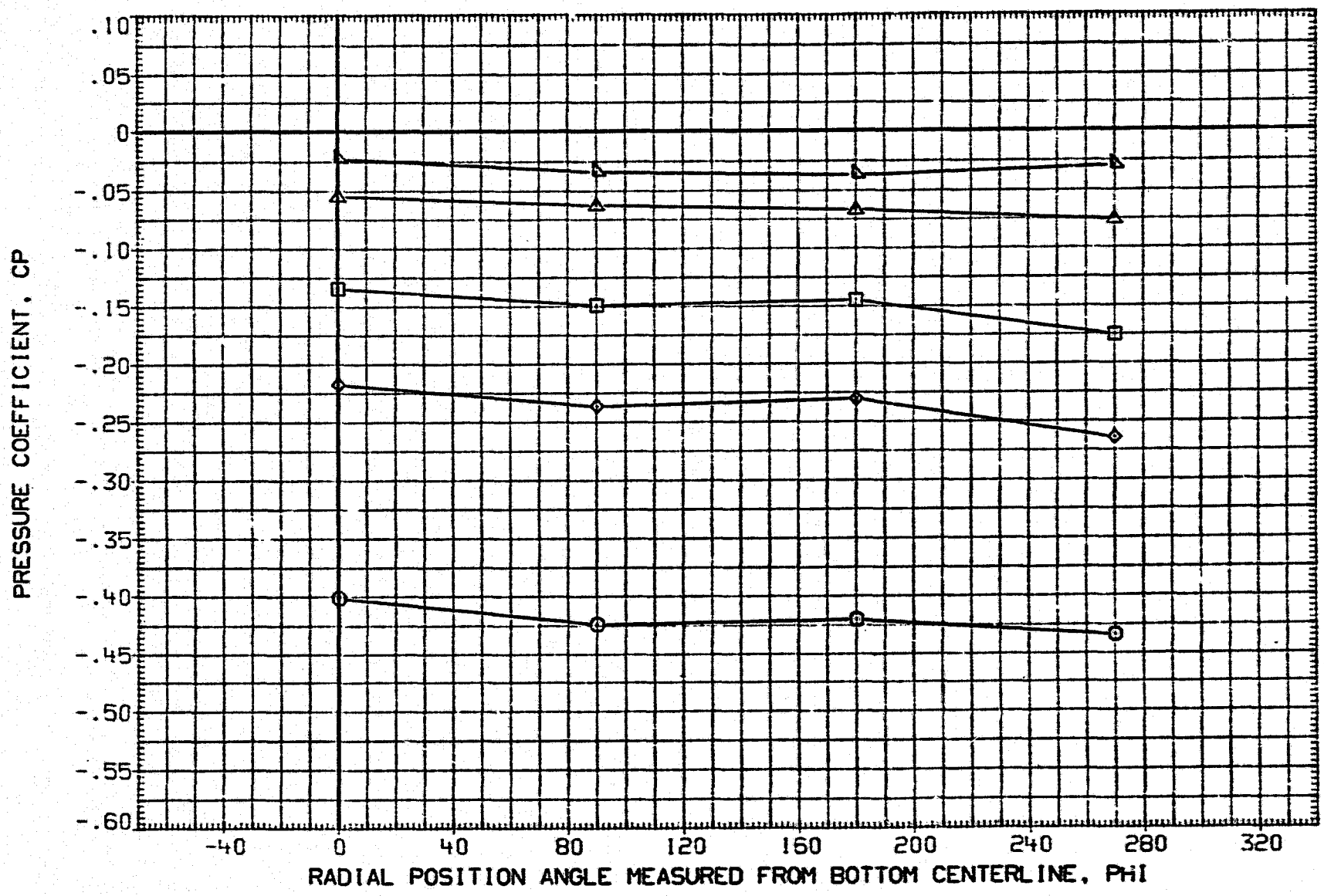


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

ALPHA = .000 BETA = -4.000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | PN/L |
|---|---|---|---|---|---|---|---|
| (BE4132) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4124) | □ | ARC11-023IA80 OTS(SRB=N ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4127) | ◇ | ARC11-023IA80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4110) | ◁ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4105) | ◁ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |

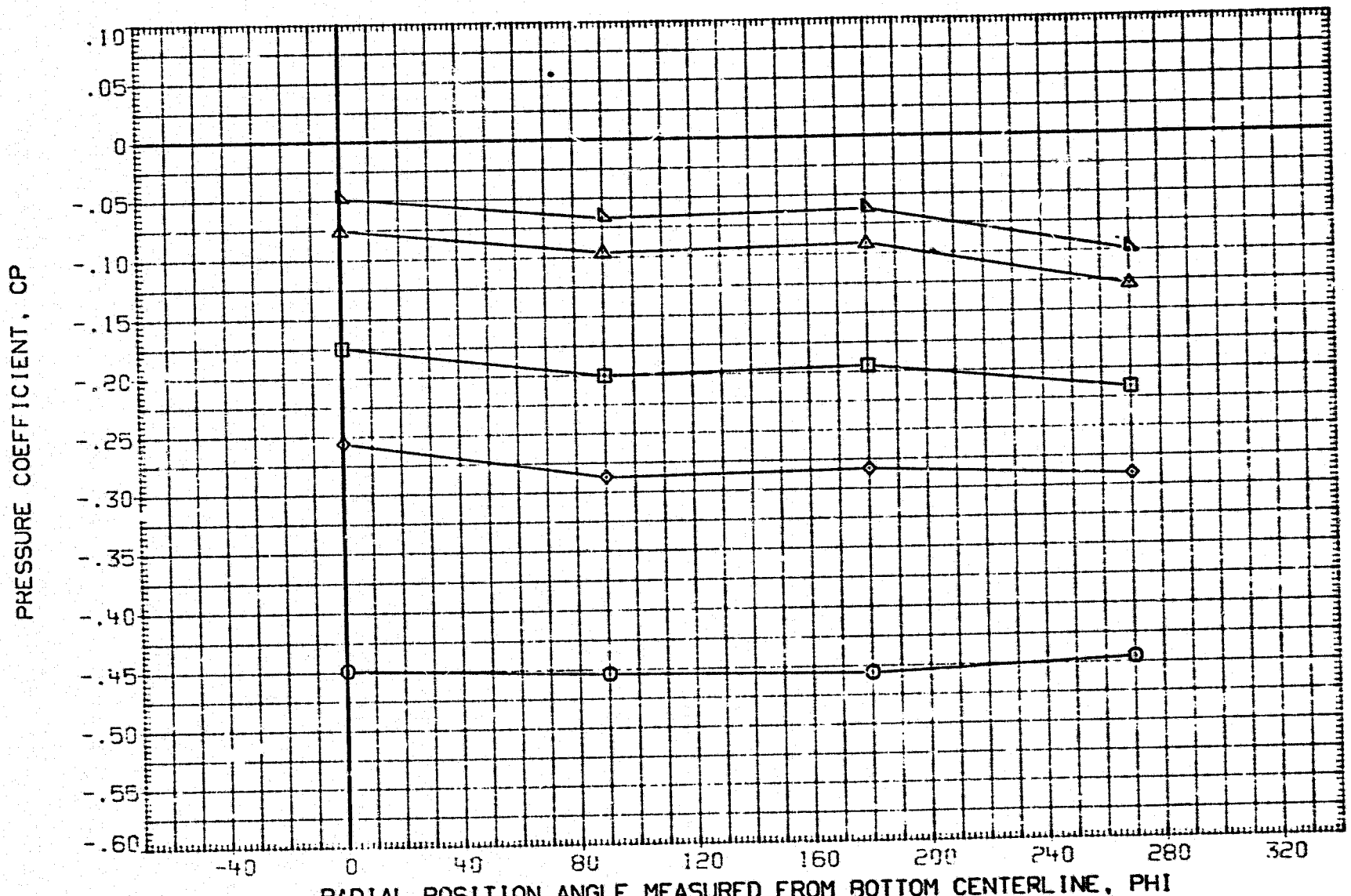


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

ALPHA = .000 BETA = .000 XB/LB = .950

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | ELV-IB | ELV-OB | MACH | RN/L |
|---|---|---|---|---|---|---|---|
| (BE4132) | ○ | ARC11-023IA80 OTS(SRB=OFF ORB=OFF) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4124) | □ | ARC11-023IA80 OTS(SRB=N OPB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4127) | ◇ | ARC11-023IA80 OTS(SRB=N- ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4110) | △ | ARC11-023IA80 OTS(SRB=N+ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |
| (BE4105) | ▷ | ARC11-023IA80 OTS(SRB=N++ ORB=N ) | SRB SKIRT | .000 | .000 | 1.400 | 4.250 |

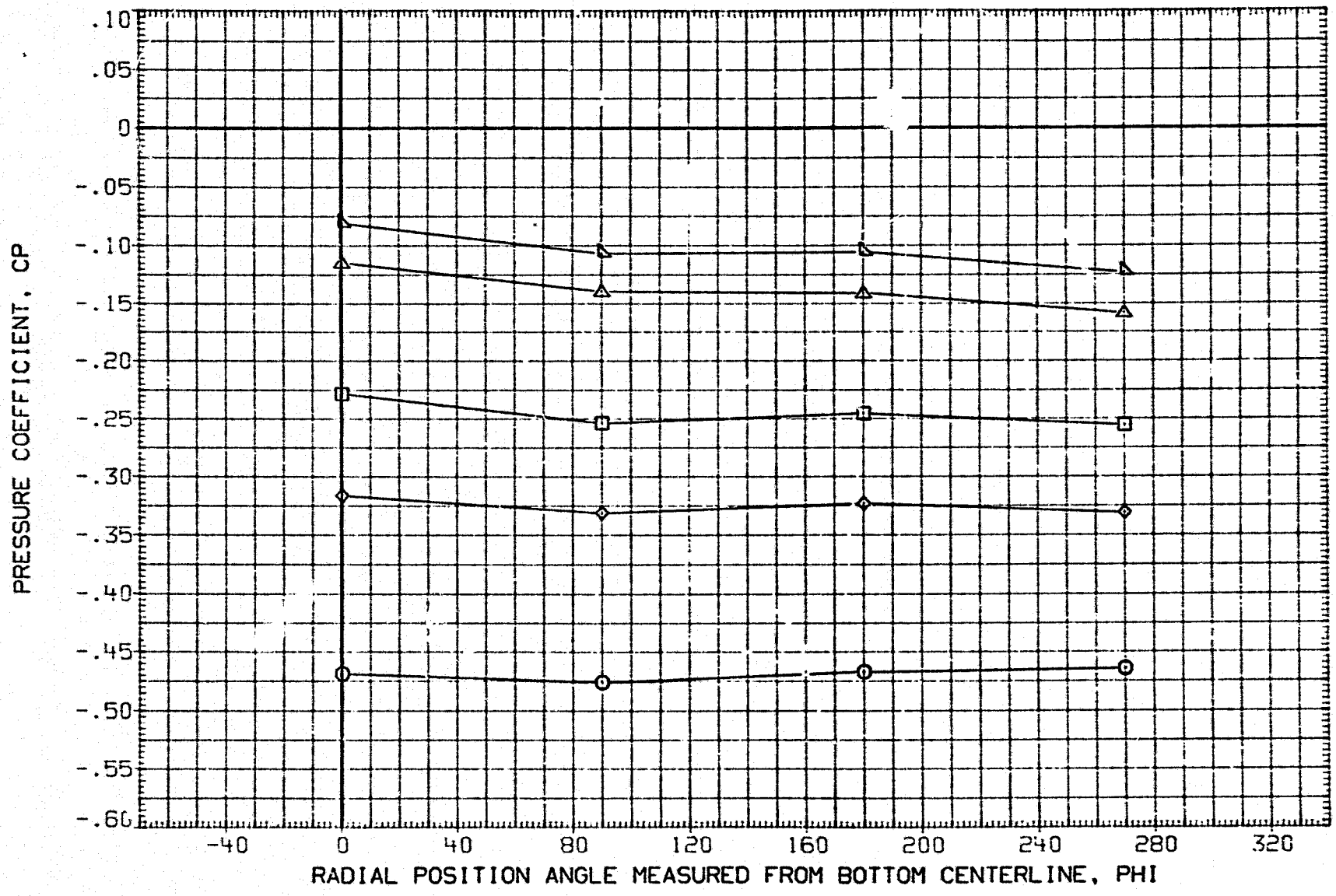


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

ALPHA = .000 BETA = 4.000 XB/LB = .950